



Australasian  
Gynaecological  
**Endoscopy & Surgery**  
Society Limited



THE INTERNATIONAL SOCIETY  
FOR GYNECOLOGIC ENDOSCOPY



**ISGE 24TH  
ANNUAL CONGRESS**  
in conjunction with the  
**AGES XXV ANNUAL  
SCIENTIFIC MEETING 2015**

**ABSTRACT  
BOOKLET**

# Controversies and Challenges in Minimally Invasive Surgery

**AN AGES & ISGE MEETING  
4-7 March 2015**

Crown MELBOURNE Australia

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# Controversies and Challenges in Minimally Invasive Surgery

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## AGES & Congress Secretariat

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*For any queries regarding this congress, please contact the AGES Secretariat.*



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# Controversies and Challenges in Minimally Invasive Surgery

AN AGES & ISGE MEETING  
4-7 March 2015  
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## Other AGES Meetings in 2015



**AGES Pelvic Floor  
Symposium & Workshop XVI  
7 & 8 August 2015  
SYDNEY Australia**



**AGES Focus Meeting 2015  
6 & 7 November 2015  
HOBART Australia**



**AGES / RANZCOG  
Trainee Workshop XI 2015  
27 & 28 June 2015  
Kolling Institute  
Sydney, Australia**

## Membership of AGES and ISGE

Membership application forms are available from the AGES and ISGE websites:

[www.ages.com.au](http://www.ages.com.au)

[www.isge.org](http://www.isge.org)

## Prizes & Awards

### Award

#### **Best Free Communication Presentation**

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#### **AGES Travelling Fellowship 2015**

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## CPD Points

This meeting is a RANZCOG Approved O&G Meeting. Eligible Fellows of this college can claim 20 points for full attendance.

The Applied Medical Pre-Congress Workshop has been approved for 6 points for full attendance.

If the meeting is used for critical reflection and practice improvement, PR&CRM Points can be claimed by submitting a reflection worksheet to RANZCOG. Visit the RANZCOG Website or AGES Registration Desk for forms.

## Crown Melbourne

8 Whiteman Street

Southbank, Melbourne, Victoria 3006

Australia

### Parking

- Multi-level car park: \$18/day. Entry via Clarke Street, Haig Street or Kingsway (North bound), height clearance of 2.0 metres.
- Basement car park: \$50/day. Entry via Whiteman St, Kings Bridge (South bound) or Southbank Boulevard, height clearance of 2.0 metres.
- Valet parking is available at the Casino Atrium Entrance - Whiteman Street. Cost is \$55 per 24 hour period. Payment is on exit.

*Prices correct at time of printing – prices may change without notice.*

## Internet

Internet will be available, please see registration for more information.

*This event will take place on the land of the Wurundjeri People.  
We would like to pay our respects to the Elders both past and present.*



# Welcome

## Dear Colleagues,

On behalf of Australasian Gynaecological Endoscopy and Surgical Society (AGES) and the International Society of Gynaecologic Endoscopy (ISGE) it is our privilege to welcome our International and Australian colleagues to the combined AGES XXV Annual Scientific Meeting in conjunction with ISGE 24th Annual Congress.

We are delighted to co-host such an exciting meeting in this, our 25th year. AGES has promoted the education, research and development of gynaecological endoscopy and surgery for over 25 years and we are honoured to host a distinguished faculty to help us celebrate. We have over 30 international experts who will be joined by our powerhouse local faculty.

The program focuses on *Controversies and Challenges in Minimally Invasive Surgery* and consists of a combination of lectures, debates, free communications and live surgery, telecast from Monash Health. These sessions have been designed to stimulate, excite and encourage discussion of important issues we face on a daily basis.

Both AGES and the ISGE have long been recognised for their commitment and leadership in minimally invasive gynaecologic surgery. We thank you for joining us to celebrate the first 25 years of our society and hope you enjoy this exceptional international program here at the AGES/ISGE 2015 Congress.

Regards,

**Dr Jim Tsaltas**  
President, AGES  
Congress Co-Chair

**A/Prof Anusch Yazdani**  
Vice President, AGES  
Congress Scientific Co-Chair

## Dear Colleagues,

On behalf of the International Society for Gynecologic Endoscopy (ISGE), it is with great pleasure and humility that we welcome you to the 24th Annual Congress of the ISGE, held jointly and in conjunction with XXV Annual Scientific Meeting of the Australasian Gynaecological Endoscopy and Surgical Society (AGES). With a spectacular world class city, Melbourne as the backdrop, we excitedly await this important exchange of scientific information as presented by our Australian, New Zealand, and International faculty, as we explore the theme of this extraordinary educational enclave, *Controversies and Challenges in Minimally Invasive Surgery*.

We are certain that our ambitious scientific program will be invaluable to all, as together we evaluate and explore the controversies and challenges of minimally invasive surgery – those faced in the past, current challenges, and those we may face in the future. It is this keen exploratory vision as well as the unique collegiality, a hallmark of our two internationally revered societies, that is certain to make this more than an international meeting; rather, an academic experience.

So, once again, welcome one and all. We trust you will enjoy the fruit of our joint efforts.

Cordially,

**Prof Prashant Mangeshika**  
ISGE President  
Congress Co-Chair

**Prof Bruno van Herendael**  
ISGE Vice President  
Congress Co-Scientific Chair



# Program

Correct at time of printing. Program may change without notice.

## Wednesday 4 March 2015

1000 - 1600	<b>Pre-Congress Workshop: Applied Medical Advanced Laparoscopic GYN Master Class</b> International Faculty: <i>Howard Salvay</i> Australian Faculty: <i>Fariba Behnia-Willison, Greg Cario, Danny Chou</i> <b>Offsite:</b> University of Melbourne - Monash Health
1600 - 1830	Congress Registration
1830 - 2030	Opening Ceremony & Welcome Reception <b>Plenary - Promenade 1,2&amp;3</b>

## Thursday 5 March 2015

0700 - 0800	Congress Registration
0800 - 1000	<b>Session 1</b> <b>Promenade 1</b> <b>CONTROVERSIES IN FIBROIDS SURGERY</b> <b>Chairs: Charles Miller &amp; Stuart Salfinger</b>  Is laparoscopic myomectomy dead? <i>Charles Miller</i> AAGL clinical guidelines for safe morcellation <i>Kathy Huang</i> Novel approaches to morcellation and tissue extraction techniques <i>Prashant Mangeshkar</i> Laparoscopic myomectomy for massive fibroids, challenges to the surgeon <i>Matthew Siedhoff</i> AGES/RANZCOG morcellation guidelines, challenges for practice <i>Jim Tsaltas</i> Discussion <i>Panel</i>  <b>Promenade 2&amp;3</b> <b>SINGLE PORT LAPAROSCOPY AND NEW TECHNOLOGIES</b> <b>Chairs: Haider Najjar &amp; Howard Salvay</b>  Single port surgery - benefits and limitations <i>Howard Salvay</i> The challenge of adapting single port laparoscopic surgery into your laparoscopic practice <i>Haider Najjar</i> Single port laparoscopic surgery using common laparoscopic instruments <i>Sevellaraja Supermaniam</i> Single port laparoscopy for pelvic floor surgery <i>Fariba Behnia-Willison</i> Outpatient settings for transvaginal endoscopy <i>Ichnandy Rachman</i> Discussion <i>Panel</i>
1000 - 1030	Morning Tea & Trade Exhibition & Digital Free Communications
1030 - 1130	<b>Session 2</b> <b>Promenade 1</b> <b>ADENOMYOSIS</b> <b>Chairs: Emma Readman &amp; Ellis Downes</b>  The role of Adenomyosis in the infertile patient <i>Ornella Sizzi</i> Current fertility enhancing treatments for Adenomyosis <i>Anusch Yazdani</i> Does Endometrial Ablation have a role in management of Adenomyosis <i>Jason Abbott</i> Discussion <i>Panel</i>  <b>Promenade 2&amp;3</b> <b>PELVIC PAIN, THE IGNORED CHALLENGE</b> <b>Chairs: Martin Ritossa &amp; Lotte Clevin</b>  Chronic pelvic pain aetiology and assessment <i>Marilla Druitt</i> Pelvic pain management strategies for the gynaecologist <i>Maurice Chung</i> Pharmacological strategies in management of chronic pelvic pain <i>Stephen Lyons</i> Laparoscopy in the adolescent with pain <i>Sunita Tandulwadkar</i> Discussion <i>Panel</i>
1130 - 1300	<b>Session 3</b> <b>Promenade 1</b> <b>FREE COMMUNICATION SESSION A</b> <b>Chairs: Robert O'Shea &amp; Matthew Siedhoff</b> <i>*See insert for full listing</i>  <b>Promenade 2&amp;3</b> <b>FREE COMMUNICATION SESSION B</b> <b>Chairs: Stephen Lyons &amp; Stefano Bettocchi</b> <i>*See insert for full listing</i>
1300 - 1400	Lunch & Trade Exhibition & Digital Free Communications

1400 - 1600	<p><b>Session 4</b></p> <p><b>Promenade 1</b>  <b>ENDOSCOPIC SURGERY FOR THE OBESE, A CHALLENGE TO BE ADDRESSED</b>  <b>Chairs: Tom Jobling &amp; Jorge Dotto</b></p> <p>Theatre setup and entry techniques for the morbidly obese  <i>Stuart Salfinger</i></p> <p>Laparoscopic surgical training, the Japanese method  <i>Tomonori Hada</i></p> <p>Weight loss initiatives for the obese patient prior to surgery, controversy or practice?  <i>Tom Manley</i></p> <p>Anaesthetic challenges for the obese patient in laparoscopy  <i>Richard Barnes</i></p> <p>Is Uterine Artery Ligation at its origin safe in the obese patient, the evidence and the technique  <i>Prakash Trivedi</i></p> <p>Discussion  <i>Panel</i></p>	<p><b>Promenade 2&amp;3</b>  <b>ADHESIONS MANAGEMENT</b>  <b>Chairs: Prashant Mangeshkar &amp; Jason Abbott</b></p> <p>Pathophysiology of adhesion formation  <i>Simon McDowell</i></p> <p>The challenge of adhesions prevention, strategies for the surgeon  <i>Daniel Kruschinski</i></p> <p>Intraoperative adhesions, your frequent companion in surgery, guide to management  <i>Bruno van Herendael</i></p> <p>Fertility and adhesions  <i>Martin Ritossa</i></p> <p>A review of the evidence of adhesion prevention products  <i>Harry Merkur</i></p> <p>Discussion  <i>Panel</i></p>
1600 - 1630	Afternoon Tea & Trade Exhibition & Digital Free Communications	
1630 - 1700	<p><b>Session 5</b></p> <p><b>Plenary - Promenade 1,2&amp;3</b>  <b>ISGE HONORARY LECTURE</b>  <b>Chair: Prashant Mangeshkar</b></p> <p>Gynaecological Endoscopy - a tale of great vision with an unexpected outcome! <i>Peter Maher</i></p>	

## Friday 6 March 2015

0730 - 0800	Congress Registration	
0745 - 0845	Arrival tea and coffee and croissants	
0800 - 0835	<p><b>Session 6</b></p> <p><b>Plenary - Promenade 1,2&amp;3</b>  <b>THE PERPETUAL DANIEL O'CONNOR LECTURE</b>  <b>Chair: Alan Lam</b>          Celebration of gynaecological endoscopy - 25 years on <i>Robert O'Shea</i></p>	
0840 - 1115	<p><b>Session 7</b></p> <p><b>Plenary - Promenade 1,2&amp;3</b>  <b>LIVE SURGERY FROM MONASH MEDICAL CENTRE</b>  <b>Moderators: Greg Cario &amp; Ellis Downes</b></p>	
1115 - 1145	Morning Tea & Trade Exhibition & Digital Free Communications	
1145 - 1300	<p><b>Session 8</b></p> <p><b>Promenade 1</b>  <b>INFERTILITY</b>  <b>Chairs: Anusch Yazdani and Resad Paya Pasic</b></p> <p>Is laparoscopy a valid tool in the investigation and treatment of infertility?  <i>Resad Paya Pasic</i></p> <p>Polypectomy and Septi in the management of the infertile patient, what is the evidence?  <i>Stefano Bettocchi</i></p> <p>Controversy of fibroid surgery, should intramural fibroids be removed prior to IVF?  <i>Ben Kroon</i></p> <p>Is there any role for laparoscopic tubal anastomosis?  <i>Paul PG</i></p> <p>Laparoscopic ovarian drilling: revisited  <i>Hisham Arab</i></p> <p>Discussion  <i>Panel</i></p>	<p><b>Promenade 2&amp;3</b>  <b>ONCOLOGY FOR THE GENERALIST</b>  <b>Chairs: Stuart Salfinger and Masaaki Andou</b></p> <p>Ovarian cancer screening, current status and future challenges  <i>Tom Jobling</i></p> <p>Management of endometrial hyperplasia, controversies and challenges  <i>Keith Harrison</i></p> <p>Endometriosis and pelvic cancer, controversy?  <i>Jason Tan</i></p> <p>Leiomyosarcoma and stromal cell tumours of the uterine body, incidence and diagnosis  <i>Stuart Salfinger</i></p> <p>Discussion  <i>Panel</i></p>
1300 - 1400	Lunch & Trade Exhibition & Digital Free Communications	
1400 - 1530	<p><b>Session 9</b></p> <p><b>Promenade 1</b>  <b>FREE COMMUNICATION SESSION C</b>  <b>Chairs: Marcus Carey &amp; Ornella Sizzi</b>  <i>*See insert for full listing</i></p>	<p><b>Promenade 2&amp;3</b>  <b>FREE COMMUNICATION SESSION D</b>  <b>Chairs: Ajay Rane OAM &amp; Tamer Seckin</b>  <i>*See insert for full listing</i></p>
1530 - 1600	Afternoon Tea & Trade Exhibition & Digital Free Communications	



1600 – 1730	<b>Session 10</b> <b>Promenade 1</b> <b>HYSTERECTOMY</b> <b>Chairs: Harry Merkur &amp; Michael East</b>  Laparoscopic hysterectomy, what's the point of evidence? <i>Anusch Yazdani</i> Uterine debulking following TLH, the pelvic surgeon at work <i>Prashant Mangeshikar</i> Best hysterectomy for your patient, cost & evidence based <i>Bashkar Goolab</i> Laparoscopic hysterectomy, what is the limit? <i>Danny Chou</i> The impact of Mirena and ablation on global hysterectomy trends, current and future challenges <i>Ellis Downes</i>	<b>Promenade 2&amp;3</b> <b>COMPLICATIONS</b> <b>Chairs: Charles Miller &amp; Martin Ritossa</b>  Managing intraoperative bleeding at laparoscopy <i>Emma Readman</i> Suturing at complications, techniques, needles and suture materials <i>Bruno van Herendael</i> Managing bowel injuries during laparoscopic surgery <i>Martin Healey</i> The role of intervention radiology in gynaecological surgery <i>John Vrazas</i> Update on the haemostatic agents <i>Pattaya Hengrasmee</i> Management of major laparoscopic complications <i>Masaaki Andou</i>
1730 – 1830	<b>AGES AGM – MEMBERS ONLY</b> <b>Promenade 1</b>	<b>ISGE General Assembly – MEMBERS ONLY</b> <b>Promenade 2&amp;3</b>
1930 – 2230	<b>AGES 25th Anniversary Gala Dinner</b> <b>Offsite: National Gallery of Victoria</b>	

## Saturday 7 March 2015

0800 – 0830	Congress Registration	
0830 – 1030	<b>Session 11</b> <b>Promenade 1</b> <b>ENDOMETRIOSIS</b> <b>Chairs: Paul PG &amp; Jason Tan</b>  Endometriosis and pain, does surgery have a role? <i>Alan Lam</i> Preoperative assessment of DIE <i>Luk Rombauts</i> Blue Contrast Techniques for visualising subtle endometriosis, controversy or fact? <i>Tamer Seckin</i> Controversies in the Aetiology of stage I and II Endometriosis <i>Michael East</i> The current management of Endometriomata <i>Alberto Valero</i> Discussion <i>Panel</i>	<b>Promenade 2&amp;3</b> <b>HYSTEROSCOPY</b> <b>Chairs: Jason Abbott &amp; Lotte Clevin</b>  Modern management of Asherman's Syndrome <i>Jim Tsaltas</i> Hysteroscopic morcellation, evolution or revolution? <i>Rajendra Sankpal</i> Office hysteroscopy <i>Stefano Bettocchi</i> Hysteroscopy in fertility enhancement <i>Lotte Clevin</i> A review on global endometrial ablation <i>Catarina Ang</i> The hysteroscopic approach to the management of congenital uterine anomalies <i>Osama Shawki</i> Discussion <i>Panel</i>
1030 – 1100	Morning Tea & Trade Exhibition & Digital Free Communications	
1100 – 1200	<b>Session 12</b> <b>Promenade 1</b> <b>TRAINEES AND BEYOND – ALL WELCOME</b> <b>Chairs: Anusch Yazdani &amp; Jim Tsaltas</b>  Current status of the AGES Training Program <i>Alan Lam</i> Surgical experience in the AGES accredited fellowship program <i>Jason Abbott</i> A step by step approach for fellows: laparoscopic hysterectomy <i>Stuart Salfinger</i> Learning anatomy for laparoscopic surgery <i>Alfonso Rossetti</i> SMAPPS Medical Apps to change patient care and medicine <i>Paul Wetter</i>	<b>Promenade 2&amp;3</b> <b>VAGINAL AND PELVIC FLOOR SURGERY</b> <b>Chairs: Bashkar Goolab &amp; Stephen Lyons</b>  Pelvic floor surgery, transition to robotics <i>Greg Cario</i> Ambulatory surgery for stress incontinence - what is the current status? <i>Ajay Rane OAM</i> Management of obstetric trauma <i>Salwan Al-Salihi</i> Transvaginal mesh controversy - where to from here? <i>Marcus Carey</i>
1200 – 1230	<b>Session 13</b> <b>Promenade 1</b> <b>DEBATE: LAPAROTOMY SHOULD BE THE ONLY METHOD FOR MYOMECTOMY</b> <b>Chairs: Jim Tsaltas &amp; Haider Najjar</b> Affirmative... <i>Tom Jobling and Stuart Salfinger</i> Negative... <i>Charles Miller and Kathy Huang</i>	
1230 – 1300	Close of Conference and Presentation of Awards and Certificates	
1300 – 1400	Lunch	



# Free Communication Sessions

Correct at time of publication. Program may change without notice.

## Thursday 5 March 2015

1130 – 1300

### Session 3

#### Promenade 1

#### FREE COMMUNICATION SESSION A

**Chairs: Robert O'Shea & Matthew Siedhoff**

Summary of findings from a Systematic Review on the use of Pre-operative Mechanical Bowel Preparation in Abdominal, Laparoscopic and Vaginal Surgery  
*Amy Arnold*

Incidence of malignancy and fibroid variants at surgery for presumed benign symptomatic fibroids  
*Pui-Wan Chan*

Quality of Life after Laparoscopic Mesh Sacrocolpopexy - Prospective outcomes at 6 weeks and 1 year post-operatively  
*Brian Tsai*

Biopsy of uterine tumour and frozen section histopathology prior to laparoscopic morcellation – a pilot study  
*Phoebe Hong*

Short Term Failure Rate of Laparoscopic Excision of Endometriosis: A Case Series  
*Keryn Harlow*

Laparoscopic surgery for colorectal endometriosis: An Australian series of 307 cases  
*Hannah Wills*

Improving care of Women with Endometriosis. Exploring the Knowledge and Perception of Endometriosis in Australia and the Impact of Endometriosis on Partners  
*Devini Ameratunga*

Retrospective clinical audit comparing outcomes of Magnetic Resonance Guided Focused Ultrasound (MRgFUS) in the treatment of submucosal uterine fibroids and all other fibroid types at the Royal Women's Hospital Melbourne  
*Marina Demyanenko*

Risk of Uterine Body Malignancy: A Monash Health Retrospective Audit  
*Avelyn Wong*

#### Promenade 2&3

#### FREE COMMUNICATION SESSION B

**Chairs: Stephen Lyons & Stefano Bettocchi**

Bowel and bladder function after surgery for endometriosis involving bowel  
*Ruth Cameron-Jeffs*

Making the diagnosis of endometriosis in hispanic women: How differing diagnostic criteria alter prevalence rates  
*Claire Templeman*

Value of second line conservative surgery for symptomatic cases of recurrent endometriosis  
*Tarek Saleh*

What is the role of prophylactic antibiotics therapy in NovaSure endometrial ablation? A 4-year retrospective audit  
*Payam Nikpoor*

Utilisation and Cost Effectiveness of the Outpatient Hysteroscopy Service at Middlemore Hospital, South Auckland, New Zealand  
*Sarah Corbett*

The responsiveness of adenomyosis to medical and surgical treatments  
*Blake Knapman*

Intrauterine adhesions following hysteroscopic treatment for retained products of conception: what are the risk factors?  
*Oshri Bareil*

Comparison of SILS (Single incision laparoscopic surgery) with traditional laparoscopy  
*Yogender Yadav*

Total laparoscopic hysterectomy for a large cervical posterior fibroid impacted in the pelvis  
*Lionel Reyftmann*

## Friday 6 March 2015

1400 - 1530

### Session 9 -

#### Promenade 1

#### FREE COMMUNICATION SESSION C

**Chairs: Marcus Carey & Ornella Sizzi**

Laparoscopic bowel resection for deep infiltrating endometriosis: The CARE experience  
*Pattaya Hengrasmee*

SWAPS and Da Vinci®: Entering the Age of Robotics  
*Amy Goh*

Fibroid Morcellation at Single Incision Surgery  
*Tom Manley*

11 Year Audit of Outpatient Hysteroscopy Service at Mercy Hospital for Women, Melbourne  
*Tony Ma*

Trans vaginal endoscopy (a.k.a Fertiloscopy): an Australian perspective  
*Lionel Reyftmann*

Avoiding intra operative unexpected Leiomyosarcoma: Does age, menopausal status or clinical presentation assist risk stratification?  
*Shamitha Kathurusinghe*

The first Single Site Robotic Assisted Laparoscopic Sacro-colpopexy in Australia  
*Felix Chan*

Establishment of an Endometriosis Support Group  
*Wendy Dawson*

3 Year Audit of a Multidisciplinary Approach to the Investigation and Management of Severe Endometriosis  
*Tony Ma*

#### Promenade 2&3

#### FREE COMMUNICATION SESSION D - Video Session

**Chairs: Ajay Rane OAM & Tamer Seckin**

Laparoscopic Adenomyectomy with Triple Flap Closure - Laparoscopic Modification of the Osada Technique  
*Joanne McKenna*

Review of Intracorporeal Uterine Tissue Extraction in Minimally Invasive Surgery: Video Presentation of In-Bag Morcellator  
*Supuni Kapurubandara*

Tips and Tricks: Step-By-Step Laparoscopic Multiport Contained Morcellation After Myomectomy  
*Hasan Titiz*

Uterine artery ligation – to clip or let it slip?  
*Luke McLindon*

Surgical pearl of colpotomy and specimen removal for laparoscopic myomectomy  
*Tomonori Hada*

Surgical tips and tricks in laparoscopic hysterectomy for the treatment of acute urinary retention caused by impacted cervical fibroid  
*Pattaya Hengrasmee*

'A stitch in time . . .' isn't always enough. A case of repeated laparoscopic cervical cerclages in a grand multip  
*Joanne McKenna*

Single Incision Hysterectomy - The Critical Steps  
*Tom Manley*

Review of Opportunistic Bilateral Salpingectomy during Gynaecological Surgery for Benign Disease: The evidence, controversies and future challenges  
*Supuni Kapurubandara*



# Digital Free Communications

Correct at time of publication. Program may change without notice.

Diaphragmatic endometriosis: What should be expected?

A case report  
*Reem Alanazy*

Case study: Presentation and Surgical Management of an Accessory Uterine Cavity  
*Rachel Annetta*

Hysteroscopic management of retained products of conception post Cesarean section, Two Case Reports and Review of the Literature  
*Oshri Barel*

The use of barbed sutures in minimally invasive hysterectomy: a literature review  
*Caetlyn Davis*

Laparoscopic removal of ovarian vein coils  
*Kim Dobromilsky*

Laparoscopic resection of interstitial ectopic pregnancy  
*Amani Harris*

Tips to mitigate litigation risk of a migrated Mirena IUD combined with laparoscopic repair of dehisced C-section scar  
*Pattaya Hengrasmee*

Laparoscopic entry in the presence of a large ovarian cyst  
*Jung-Yoon Huh*

Non-Tubal Ectopic Pregnancies  
*Genevieve Kan*

Ovarian torsion in pregnancy: Video case report and review of the literature  
*Supuni Kapurubandara*

How have Australian Gynaecologists embraced Robotic surgery compared to the rest of the world? A review of our progress to date  
*Louise Konaris*

Consequences of Uterine Herniation Through The Inguinal Canal - A Hermaphrodite's Story  
*Tom Manley*

Single Incision Cuff Closure Made Easy  
*Tom Manley*

Use of other treatment before hysterectomy for benign conditions - what about PCS and CD 10?  
*Roger McMaster-Fay*

Laparoscopic management of suspected benign giant ovarian cysts  
*Lionel Reyftmann*

Unexplained Prelabour Broad Ligament Bleeding in a Preterm Primigravida  
*Nina Reza Pour*

Total laparoscopic hysterectomy: Single surgeon experience in a regional centre after changing uterine manipulator and surgical technique  
*Raymond Steve*

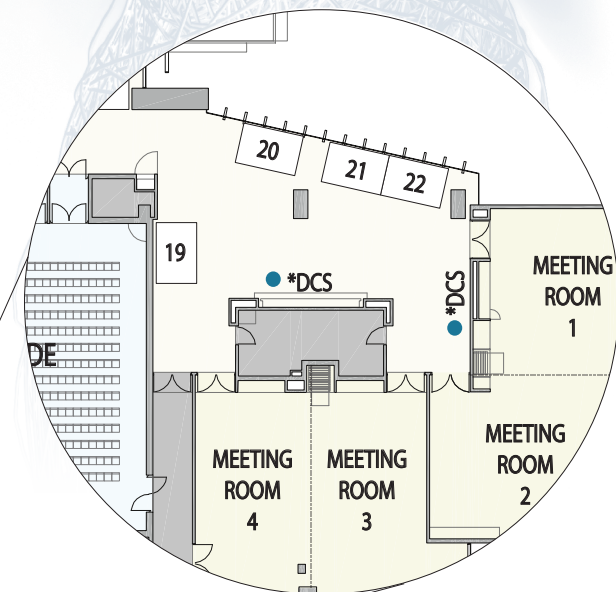
Tips and Tricks: Pre-Conceptional Laparoscopic Cervical Cerclage Made Easier and Safer with Titz Uterovaginal Manipulator  
*Hasan Titiz*

Laparoscopic Resection after Ectopic Pregnancy in Rudimentary Uterine Horn with Hypoplastic Vagina  
*Brian Tsai*

Pleural endometriosis: an unexpected finding during thoracic surgery  
*Shih-Em Yao*

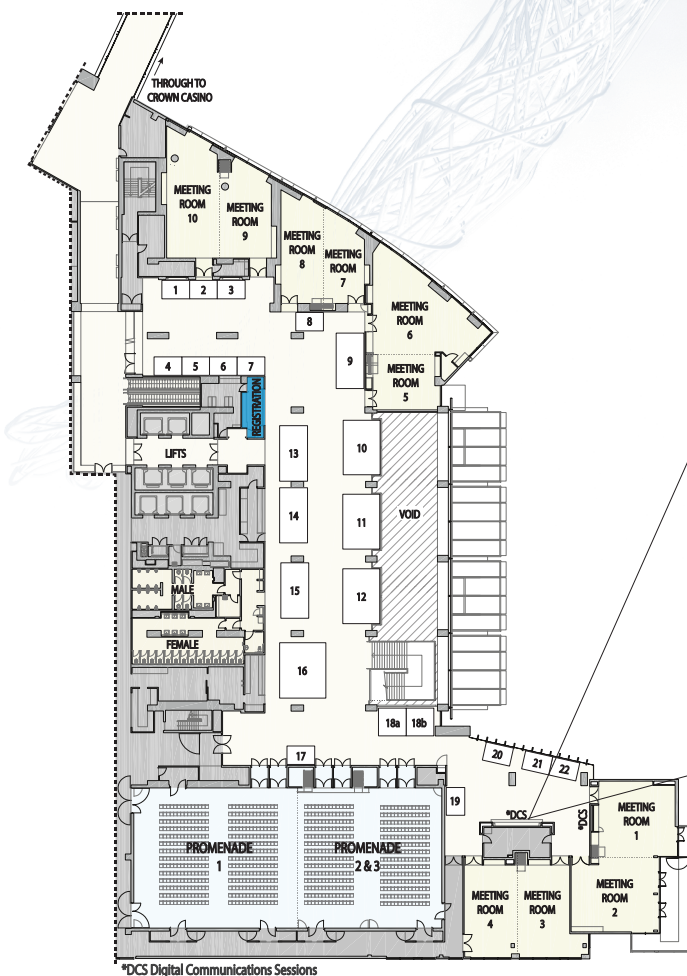
Laparoscopic ovariopexy for the treatment of ovarian torsion in an adolescent with massive polycystic ovaries  
*Charley Zheng*

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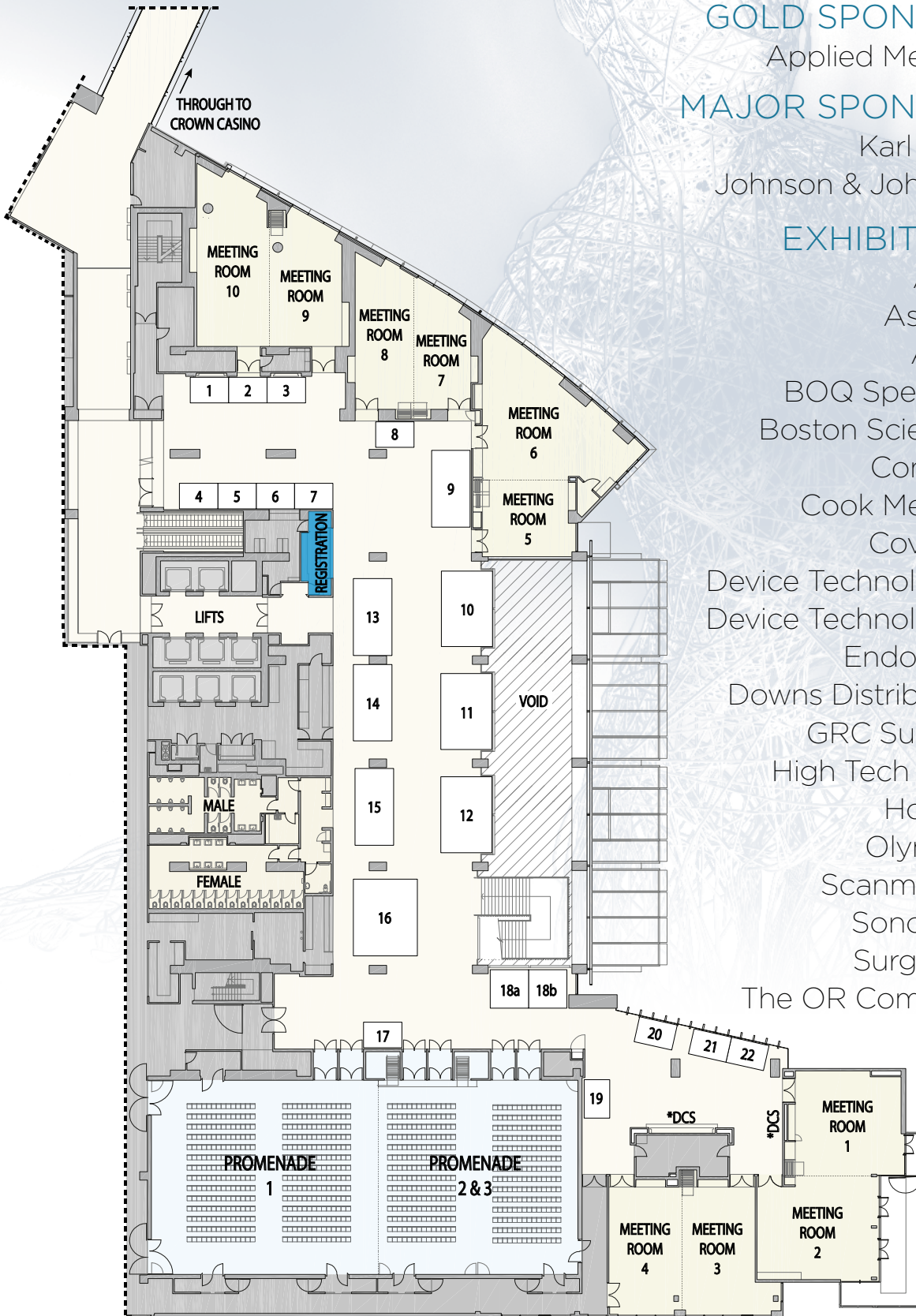
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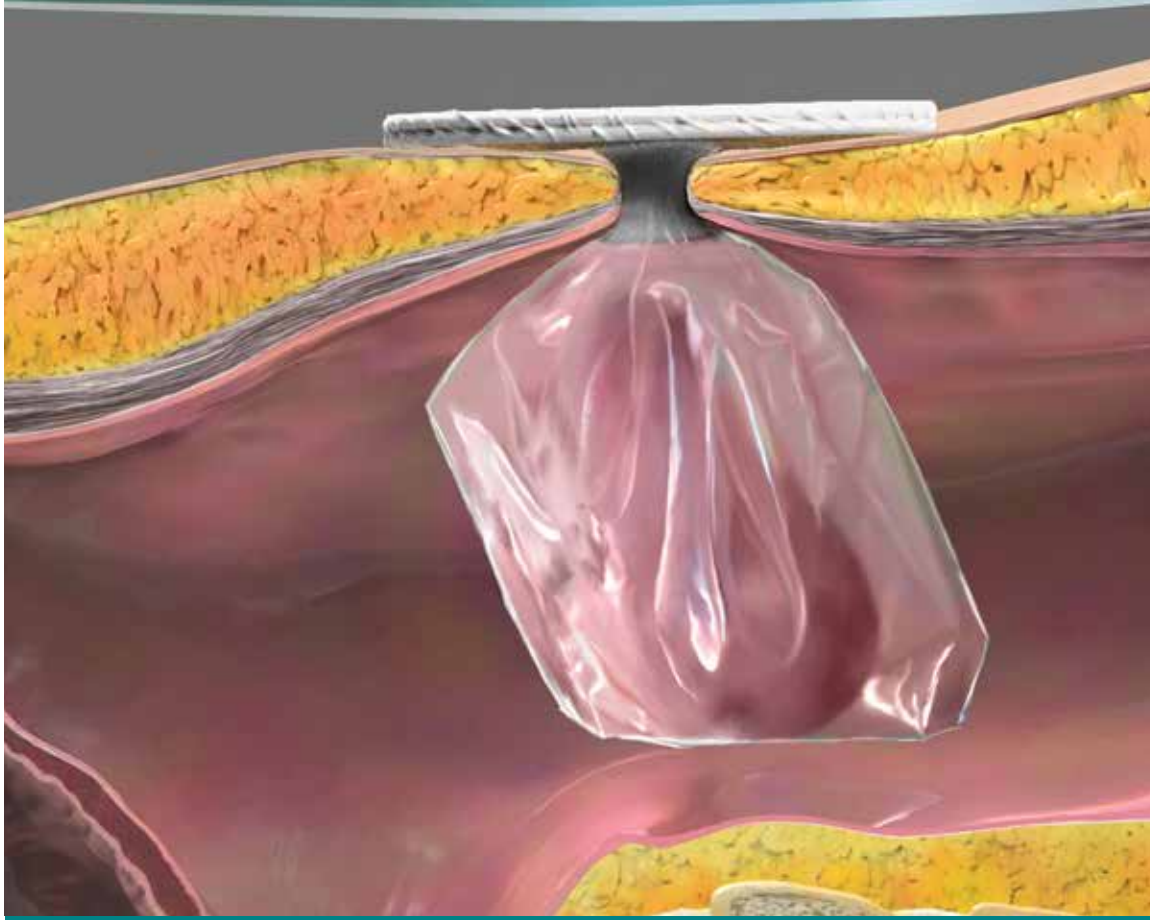
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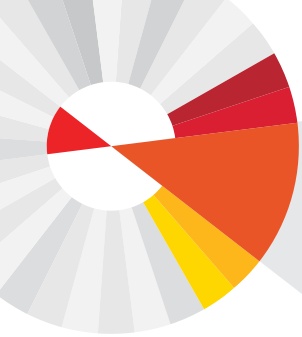
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# Program Abstracts

Thursday 5 March 2015

Session 1 / 0800 - 1000

Promenade 1

CONTROVERSIES IN FIBROIDS SURGERY

## Is laparoscopic myomectomy dead?

Charles Miller

On April 17, 2014, the U.S. Food and Drug Administration (FDA), released a safety communication discouraging the use of laparoscopic power morcellation for removal of the uterus or uterine fibroids. The basis of their concern was the potential risk of inadvertent spread of undiagnosed leiomyosarcoma tissue. Although studies are small and flawed, if morcellation occurs whether via electronic power morcellation at laparoscopy, or cold knife morcellation at the vagina, the disease free period and overall survival are thought to be decreased.

While many hospitals and hospital systems throughout the United States immediately called for a moratorium on electronic power morcellation, many institutions have developed an improved informed consent policy. Unfortunately, yielding to the FDA safety communication, Johnson & Johnson, one of the leaders in electronic power morcellation, halted world-wide sales, distribution and promotion of their power morcellation systems.

The FDA originally quoted a risk of one in three hundred and fifty-one patients. At subsequent FDA hearings, a more robust evaluation of the literature noted a more likely risk of over one in eight thousand. Despite the more thorough research, on November 24, 2014, the FDA released a statement recommending a boxed warning to provide informed consent and a warning against the use of laparoscopic power morcellation to treat uterine fibroids – “Laparoscopic power morcellators are contraindicated for removal of uterine tissue containing suspected fibroids in patients who are: peri- or post-menopausal, or candidates for *en bloc* tissue removal through the vagina or mini-laparotomy”.

In light of the latest FDA news release, one must question our long term ability to perform a laparoscopic myomectomy. It is clear that this will not only affect minimally invasive gynecologic surgeons in the United States, but will become a worldwide concern as well.

This discussion centers on the current options available to fibroid extraction and how electronic power morcellation can be performed despite the FDA warnings

## AAGL clinical guidelines for safe morcellation

Kathy Huang

The benefits of minimally invasive surgery for treating a variety of gynecologic conditions are well known. Nearly half of the estimated 400,000 inpatient-based hysterectomies performed annually in the United States for benign indications are completed minimally invasively. Thousands more women benefit from MIS in uterus-sparing procedures such as myomectomy. The ability to offer less invasive surgery to women often requires the removal of large tissue specimens through small incisions, which may be facilitated by morcellation. The term morcellation encompasses a variety of surgical techniques, some used in concert with specific devices, used to enable removal of large specimens from the peritoneal cavity, avoiding the need for laparotomy.

Manual morcellation with a scalpel or electro-mechanical morcellation with a device specifically designed to fragment tissue specimens should only be considered in women at low risk for a gynecologic malignancy and when an appropriate preoperative assessment is suggestive of a benign disorder. When occult malignancy is inadvertently encountered, EMM hinders the ability to perform a comprehensive histopathological evaluation of a uterine specimen. Additionally, dissemination of tumor or uterine fragments, either benign or malignant, throughout the intraperitoneal cavity may necessitate further surgical interventions or other treatment and may worsen prognosis. The possibility of this complication may have been previously underestimated.

While the U.S. Food and Drug Administration (FDA) approved the first electromechanical morcellation device in 1995, it recently issued a statement discouraging the use of “power” or electromechanical morcellation for hysterectomy and myomectomy in most women with uterine myoma. The Administration cited safety concerns, specifically the potential for dissemination of occult uterine cancer that may occur with the morcellator technology. The FDA’s recommendations must be taken very seriously, as patient safety and avoiding preventable harm are of paramount importance. However, the studies analyzed by the FDA in formulating this recommendation were not stratified by risk factors for sarcoma and were not necessarily performed in the setting of reproductive-age women with presumed benign leiomyomata. One must also consider the implications of alternative surgical options for women if morcellator use is suspended nationwide. The alternatives for women with large uteri or uterine myomas would, in some cases, involve abandoning MIS or the ability



to morcellate and potentially deny the clear benefits this approach provides to hundreds of thousands of women around the world each year.

### **Novel approaches to morcellation and tissue extraction techniques**

**Prashant Mangeshikar**

*Abstract not available at time of publication. Please check the conference app for updates.*

### **Laparoscopic myomectomy for massive fibroids, challenges to the surgeon**

**Matthew Siedhoff**

*Abstract not available at time of publication. Please check the conference app for updates.*

### **AGES/RANZCOG morcellation guidelines, challenges for practice**

**Jim Tsaltas**

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Promenade 2&3

SINGLE PORT LAPAROSCOPY AND NEW TECHNOLOGIES

### **Single port surgery – benefits and limitations**

**Howard Salvay**

We will discuss, via video format, the utility and benefits of Single Incision Surgery demonstrating the usefulness in oophorectomy/salpingectomy for risk reduction. Additionally simple and complex hysterectomy procedures will show application of the Single Incision/Reduced Port approach. Limitations will also be discussed regarding anatomical considerations of incisions and complex findings along with concerns during cystectomy and other procedures in which the target tissue requires triangulation that affect Single Incision Surgery.

### **The challenge of adapting single port laparoscopic surgery into your laparoscopic practice**

**Haider Najjar**

Minimally invasive surgery has significant benefits for patient's post operative recovery and reduced port surgery is and should be a goal for all operative gynaecologists as we move into the future. Significant advances in the field of laparoscopic surgery in recent years have been dominated by robotic assisted surgery. Single site surgery has taken somewhat of a back seat due to the inherent issues with narrow operating field and reduced manipulation angle, which cause a steep technical learning curve. This type of advanced laparoscopic surgery is not in the scope of general laparoscopic training in gynaecology and therefore few operative gynaecologists have the opportunity to master this technique. The challenge for those surgeons who want to incorporate single site surgery into their practice is not only the surgical learning curve but also how to meet these learning goals within a busy laparoscopic practice where few surgical mentors are available.

### **Single port laparoscopic surgery using common laparoscopic instruments**

**Sevallaraja Supermaniam**

Performing single incision Laparoscopic surgery is often hampered by the need of specialized instruments. Some advocate the use of "endoeye" laparoscope by Olympus while others advocate the use of the 50 cm 5 mm telescopes. Moreover there are many commercially prepared devices that makes single incision laparoscopic surgery expensive. Single incision laparoscopic surgery can be performed using normal instruments available in most operating theaters. To perform this 3 port technique, the instruments required are: a 5 mm 30 degrees telescope or a 10mm 30 degrees telescope, one 10 mm trocar, two 5 mm trocars, bipolars, graspers, scissors that are usually used during conventional laparoscopic surgery. An incision measuring 2.5 cm is made vertically through the umbilicus. The skin of the umbilicus is detached from its attachment centrally. A space is created around the incision above the rectus sheath. A Verres needle is



used to insufflate the abdomen and a 5mm or 10mm trocar with a rubber band attached to it is inserted at the centre of the incision. The pelvis is visualized. Two other 5mm trocars are placed beneath the skin as lateral as possible. The surgery is then performed using conventional instruments. The use of vessel sealing devices such as Ligasure, Enseal or Bicision can make coagulation and cutting easy. On completion of the surgery, the umbilicus is reconstructed. Using this technique, 160 cases have been performed from Feb 2011 till December 2014. The cases ranged from laparoscopic tubal ligation, laparoscopic salpingectomy for ectopic pregnancy, total laparoscopic hysterectomy and laparoscopic myomectomy. Conclusion: Single incision laparoscopic surgery can be performed without any extra cost or instrumentation in most hospitals using this simple 3 port technique.

## Single port laparoscopy for pelvic floor surgery

**Fariba Behnia-Willison**

Throughout the last few decades, pelvic laparoscopy has progressed from a generic diagnostic tool to a complex armamentarium such as single-port laparoscopy with potential benefits such as decreased postoperative pain, fewer wound complications, and better cosmesis and possible disadvantages of increased cost and operating time. This advancement was partially driven by patients' demands and expectations with the cosmetic outcome, encouraging the medical industry to innovate on further revolutionary machinery and methods of surgery. However, due to the relatively complex ergonomics, limitations of current laparoscopic instruments, and intricacy of the surgical technique for pelvic floor repair, the uptake of surgeons has been limited.

The objective of this presentation is to provide a review of current literature in regards to single-port laparoscopic pelvic floor surgery and its feasibility, safety, complication and outcome in comparison to other surgical techniques. The use of single-port surgical technique for prolapse surgeries is limited to few expert surgeon case reports, thus the best available data pertinent to current clinical practice will be presented.

Although laparoscopic single-port surgery has spread across surgical disciplines, this has not been the case for the repair of uterovaginal prolapse. We will show a video-demonstration from 2008 of mesh sacro-hysteropexy conducted, possibly for the first time in the world, to correct apical prolapse classified as stage II POPQ system.

According to the literature, the single-port laparoscopy seems feasible and safe, with better cosmetic results. The cost is increased and there is no benefit in terms of pain, operating time and duration of hospitalization. Beyond cosmetic results, further randomized studies are needed to determine whether the single-port surgical technique provides any benefit over conventional or robotic-assisted laparoscopic approaches amongst Endo-gynaecologists with the interest in Uro-gynaecology. The future of pelvic floor surgery will be single-port robotic-assisted surgery (with reusable arms and equipment), which offers all the advantages of laparoscopic surgery, overcoming the issues related to complexity discussed previously in a cost-effective manner.

## Outpatient setting for transvaginal endoscopy

**Ichnandy Rachman**

Transvaginal Endoscopy (TVE) is created to diagnose the cause of infertility. It is meant to avoid the risk of injury that cause by laparoscopy as a gold standar procedure for tuboperitoneal infertility, but still able to evaluate the posterior uterus, pelvic sidewalls, and adnexae. In 1998, the Leuven group (Gordts et al., 1998) described Trans Hydrolaparoscopy for exploration of the pelvic exploration of infertile patients without obvious pelvic pathology. The technique uses the transvaginal route, the patient lies in dorsal decubitus and access to the pouch of Douglas is achieved by a culdocentesis technique using a combined Veress needle-trocar system. abdominal distention is obtained by instillation of saline or preferably lactated Ringer's solution. In this way, the new technique adds the benefits of hydroflotation to the closer, clearer and more detailed view of the Fallopiian tubes and ovaries achieved by culdoscopy.

Outpatient setting for diagnostic TVE can be done under local anesthesia. Combined with diagnostic hysteroscopy and chromotubation, it can replace hysterosalpingography (HSG) as the first-line diagnostic test for the infertile woman. Studies have shown high patient tolerability with less pain reported post procedure than with HSG. TVE has been shown to have a high concordance with HSG for tubal patency, but TVE diagnosed more intrauterine abnormalities as well as finding adhesions and endometriosis not visible with HSG. In addition, salpingoscopy may be performed during TVE to assess the tubal lumen. TVE also has a high concordance rate with laparoscopy when a complete evaluation is accomplished during TVE. Complications of TVE are uncommon and minor.

This presentation will elaborate and discuss generally about TVE instrumentation, indication – contraindication and the procedure itself and more about the patient selection, preparation and the challenges that we have to encounter to make this procedure as a daily office routines. There will also some Indonesian data that show the feasibility, performance and complication of TVE.





## Session 2 / 1030 - 1130

Promenade 1  
ADENOMYSIS

### The role of Adenomyosis in the infertile patient

**Ornella Sizzi**, Angelo Tocci

Since the junctional zone myometrium started to be investigated by MR imaging, every abnormality observed has been described as indicative of the presence of endometrium in the outer myometrium or adenomyosis *sensu stricto*.

This condition is expressed mainly by a pathological thickening or abnormality of the subendometrial myometrium (myometrial halo or junctional zone).

Proliferation and hyperplasia in the junctional zone may precede the outgrowth of endometrial cells. Leyendecker et al. speculated that disruption of the specific uterine micro-environment in the basal endometrium may explain the structural and functional abnormalities of the junctional zone, such as hyperperistalsis, dysperistalsis, and inordinate smooth muscle proliferation associated with endometriosis and adenomyosis.

There is growing evidence that a pre-pregnancy disorder of the myometrial junctional zone is at the basis of defective deep placentation which, in turn, is associated with major reproductive and obstetrical complications.

Today, the investigation of reproductive outcomes in young women with junctional zone abnormalities and/or adenomyosis has become possible—thanks to MR imaging and ultrasonography; using these techniques, an improved and clinically useful correlation with histology-based diagnosis for adenomyosis has been accomplished, thanks also to the analysis of the myometrial junctional zone. The importance of myometrial junctional zone research in reproductive medicine is frequently underestimated: indeed, the inner myometrium is the critical zone for the adequate transformation of spiral arteries supplying maternal blood to intervillous spaces of the placenta and a defective transformation of myometrial spiral arteries in the placental bed has been associated with major obstetrical syndromes.

The disappearance of the distinct myometrial zonal anatomy very early during pregnancy on MR imaging has also been observed in a unique case report by Turnbull et al.

This may correspond to the early decidualization process of the myometrial spiral arteries in the placental bed well before the zone is colonized by intravascular and interstitial trophoblast.

A junctional zone thickness increase was significantly correlated with implantation failure at IVF: implantation failure rate was 95.8% for patients with an average junctional zone greater than 7 mm and a maximal junctional zone greater than 10 mm, versus 37.5% in other patient groups ( $p < 0.0001$ ), independently from cause of infertility or patients' age. The authors concluded that a pelvic MR scan showing a thickened uterine junctional zone has a negative predictive factor for embryo implantation after IVF.

### Current fertility enhancing treatments for Adenomyosis

**Anusch Yazdani**

Adenomyosis is the ectopic location of endometrial tissue deep to the endometrial-myometrial junction. Like endometriosis, adenomyosis is defined by the ectopic location of endometrial tissue and is associated with aberrant gene expression in the eutopic endometrium. Increasingly, the endometrio-myometrial interface is implicated as a distinct functional zone within the uterus fundamental to our understanding of reproductive uterine dysfunctions.

Like endometriosis, the diagnosis and clinical significance of adenomyosis remains enigmatic and has been implicated in menstrual disturbance, pain and infertility. Unfortunately, the association with endometriosis confounds studies of this condition.

The relationship between infertility and uterine adenomyosis and/or adenomyomata remains controversial. In humans, adenomyosis is a condition primarily associated with multiparity, not with infertility. Adenomyosis demonstrates a correlation with parity, history of uterine trauma including caesarean sections, spontaneous and induced abortions, and endometrial hyperplasia. Fertility studies in this area are limited by diagnostic difficulties, poor study design, confounding by the association with endometriosis and lack of diagnostic criteria. Some authors have demonstrated adverse effects, while others have failed to demonstrate any difference. Inflaming the controversy, authors have demonstrated improvements in pregnancy rates with surgical and medical therapy, further confounding the problem.



Until appropriate trials can be conducted, both the impact on fertility and the treatment of any such effect remains largely conjectural.

## Does Endometrial Ablation have a Role in Adenomyosis

Jason Abbott, Blake Knapman

The diagnoses of AUB-E and AUB-A are often confused, since the histological confirmation of adenomyosis is not possible by conservative measures<sup>1</sup>. Consequently, endometrial ablation is often used as a treatment modality, although the presence of adenomyosis may lead to a higher failure rate of ablation – up to 31%, with the diagnosis only made after further intervention such as hysterectomy is performed for women with ongoing bleeding symptoms<sup>2</sup>.

The use of diagnostic imaging such as ultrasound may be of some benefit in determining extensive adenomyosis, although more subtle glandular infiltration of the myometrium is not always as easy to demonstrate<sup>3</sup> with sensitivity and specificity of 80.8% and 61.4% respectively<sup>4</sup>. Superficial disease in the subendometrial layer may be adequately and completely treated by second generation ablation procedures, although the mechanism for these devices is to not infiltrate the myometrium deeply. For known deep disease, then resection as a primary modality may offer better post-operative outcomes, with sonographic or laparoscopic control both described as options for a deeper ablation procedure<sup>5,6</sup>.

Even in the absence of resective ablation, the technique may still be successful and therefore remains an option for women not wanting to undergo uterine removal. There is also the possibility of combination medical and surgical treatments (including progesterone containing IUD) to further decrease symptoms.

1. Wood, C 1998, 'Surgical and medical treatment of adenomyosis', *Human Reproduction Update*, vol.4, no. 4, pp. 323-336
2. Dickersin, K, Munro, M, Clark, M, Langenberg, P, Scherer, R, Frick, K, Hallock, L, Nichols, J, Yalcinkaya, T 2007, 'Hysterectomy Compared with Endometrial Ablation for Dysfunctional Uterine Bleeding: A Randomized Control Trial', *Obstetrics and Gynecology*, vol. 110, no. 6, pp. 1279-1289
3. Dueholm, M, Lundorf, E 2007, 'Transvaginal ultrasound or MRI for diagnosis of adenomyosis', *Current Opinion in Obstetrics and Gynecology*, vol. 19, pp. 505-512
4. Kepkep, K, Tuncay, Y, Goynumer, G, Tatal, E 2007, 'Transvaginal sonography in the diagnosis of adenomyosis: which findings are most accurate?', *Ultrasound in Obstetrics and Gynecology*, vol. 30, pp. 341-345
5. Preuthippan, S, Herabutya, Y 2010, 'Hysteroscopic rollerball endometrial ablation as an alternative treatment for adenomyosis with menorrhagia and/or dysmenorrhea', *Journal of Obstetrics and Gynaecology Research*, vol. 36, no. 5, pp. 1031-1036
6. Zhou, M, Chen, JY, Tang, LD, Chen, WZ, Wang, ZB 2011, 'Ultrasound-guided high-intensity focused ultrasound ablation for adenomyosis: the clinical experience of a single center', *Fertility and Sterility*, vol. 95, no. 3, pp. 900-905

Promenade 2&3

## PELVIC PAIN, THE IGNORED CHALLENGE

### Chronic pelvic pain aetiology and assessment

Marilla Druitt

Patients are often not surprised to hear that pain is usually multifactorial and their whole being needs to be addressed to improve their quality of life. Chronic (or persistent – perhaps a word associated with less catastrophising) pelvic pain has many causes and I would like to suggest a structure which Dr Susan Evans (a gynaecologist and Fellow of the Faculty of Pain medicine) uses for teaching patients, and excluding causes along the way. Hopefully I can suggest something that you will incorporate into your day to day consulting which helps shift the curve of pain across the population and reduces our need for Chronic Pelvic Pain clinics!

1. Favourite resources: IPPS [www.pelvicpain.org](http://www.pelvicpain.org) IASP [www.iasp-pain.org](http://www.iasp-pain.org) Explain Pain & NOI group Adelaide [www.noigroup.com](http://www.noigroup.com) Pain society Australia [www.apsoc.org.au](http://www.apsoc.org.au) Dr Susan Evans [www.pelvicpainsa.com.au](http://www.pelvicpainsa.com.au) and [www.pelvicpain.org.au](http://www.pelvicpain.org.au) FODMAP diet [www.shepherdworks.com.au](http://www.shepherdworks.com.au) Ultrasound imaging for endometriosis: [www.safe-endo.com.au](http://www.safe-endo.com.au)

### Pelvic pain management strategies for the gynaecologist

Maurice Chung

Chronic pelvic pain is estimated to affect 1 in 7 women, or approximately 9 million US women, with associated health care costs approaching \$3 billion annually.<sup>1</sup> The vast majority of patients with chronic pelvic pain (CPP) do not seek treatment, and less than 20% consult a gynecologist. Approximately 20% to 40% of laparoscopies are done for CPP.<sup>2</sup>

In the gynecologic literature, chronic pelvic pain is associated with endometriosis in 30% to 87% of the cases. 3-9 Endometriosis has been regarded as one of the most common causes of chronic pelvic pain in which affects an estimated 5 million U.S. women.<sup>10</sup> Definitive diagnosis of endometriosis requires operative laparoscopy evaluation. Even with new advances in treatment of this disease, the



recurrent rate remains as high as 50%.<sup>11</sup> To make the matter worse it is considered as a progressive disease in more than 60% of patients.<sup>12</sup> This often leads to many reoperations, including laparoscopies and even hysterectomies. Treatment of endometriosis-related chronic pelvic pain remains challenging to the clinicians and the results have not been satisfactory. We are exploring the data of surgical treatment of pelvic pain to see whether it is an effective solution. There are many pelvic pain generators, it is very important to evaluate and make the proper diagnosis for coexisting diseases, such as Painful Bladder Syndrome, Pudendal Neuralgia, and Pelvic Tension Myofascial Syndrome, and it is very important to treat the coexisting pain syndromes and generators to avoid multiple unnecessary surgeries.

1. Mithias SD, Kuppermann M, Liberman RF, Lipshutz RC, Steege JF. Chronic pelvic pain: prevalence, health-related quality of life, and economic correlates. *Obstet Gynecol.* 1996; 87:221-327
2. Reiter RC. A profile of women with chronic pelvic pain. *Clin Obstet Gynecol.* 1990;36:253-259
3. Cunanan RG Jr, Ciurey NG, et al. Laparoscopic findings in patients with pelvic pain. *Am. J Obstet Gynecol.* 1983; 146: 589-591
4. Kontoravdis A, Hassan E, Hassiakos D, Botsis D, et al. Laparoscopic evaluation and management of chronic pelvic pain during adolescent. *Clin Exp Obstet Gynecol.* 1999; 26:76-77
5. Ling FW. Randomized controlled trial of depot leuprolide in patients with chronic pelvic pain and clinically suspected endometriosis. *Pelvic Pain Study Group. Obstet. Gynecol.* 1998; 92: 1029-1032
6. ACOG Practice Bulletin #11. December 1991:1-14. American College of Obstetricians and Gynecologists
7. Koninckx PR, Meuleman C, Demeyere S, et al. Suggestive evidence that pelvic endometriosis is a progressive disease whereas deeply infiltrative endometriosis is associated with pelvic pain. *Fertil Steril.* 1991; 55:759-765
8. Carter JE. Combined hysteroscopic and laparoscopic findings in patients with chronic pelvic pain. *J Am Assoc Gyn Laparoscopists* 1994;2(1,pt 1):43-47
9. Ripps B, Martin D. Focal pelvic tenderness, pelvic pain and dysmenorrhea in endometriosis. *J Reprod Med* 1991;36:470-472
10. Ballweg ML. Public testimony to the U.S. Senate Committee on Labor and Resources, Subcommittee on Aging, May 5, 1993
11. Giovanni B. Recurrent endometriosis. In Nezhad CR, Buttram Jr VC, *Endometriosis. Advanced Management and Surgical Techniques*, New York, Springer-Verlag, 1994, p 159-171
12. Mahmood TA, Templeton A. The impact of treatment on the natural history of endometriosis. *Human Reprod.* 1990;5:965-970

## Pharmacological strategies in management of chronic pelvic pain

**Stephen Lyons**

Chronic pelvic pain (CPP) is a biopsychosocial phenomenon, with genetic and psychological factors thought to play a significant role. Pharmacological approaches are therefore just one of the many available components in the management of CPP. Indeed, used in isolation, the efficacy of pharmacological agents for CPP is often disappointing. This is partly because CPP comprises disparate types of pain (e.g., visceral, musculoskeletal, neuropathic), resulting from a range of a range of different pathologies. For this reason, the expression "pain killer" should be avoided, perhaps better described as a "pain reliever".

A discussion with the patient should take place prior to undergoing a trial of a pharmacological agent, outlining the rationale of using this particular medication in improving symptoms and functioning, side effects, and that failure to achieve improvement will require moving to other options.

Pharmacological options for the management of CPP include hormone therapy, palmitoyl derivatives, magnesium, fish oil products, paracetamol, anti-inflammatory drugs, tricyclic anti-depressants (low-dose), anti-convulsants, opioids and botulinum toxin. The rationale, indication(s), efficacy and side effect profile for these treatments will be discussed.

It is important to recognize that the management of CPP is most often multidisciplinary. In particular, cognitive behavioral therapy for CPP achieves perhaps the best long-term outcomes and should not be underestimated.

## Laparoscopy in the adolescent with pain

**Sunita Tandulwadkar**

Laparoscopy has been accepted as one of the most minimally invasive technique to tackle a multitude of pelvic pathologies even in adolescent age group.

Will be discussing laparoscopic management of rare uterine, tubal and ovarian pathologies at adolescent age group, which may present as abdominal pain. To mention few, large endometrioma of about 10-12 cms of size in an 18-year-old girl, 18 cm uterine fibroid in an 18-year-old girl, an ovarian fibroma in a 16-year-old girl, adenomyoma in an 18-year-old girl, twisted hematosalpinx in 16 year old girl and excision of functional non-communicating rudimentary horn with fallopian tube

All surgeries were performed without vaginal uterine manipulation to preserve virginity.

Utmost care was taken in each of the respective surgeries in terms of conserving ovarian tissue, ovarian blood supply, and post-operative adhesions, keeping future fertility of these young women in mind.



## Session 3 / 1130 - 1300

Promenade 1

FREE COMMUNICATION SESSION A

### Summary of findings from a Systematic Review on the use of Pre-operative Mechanical Bowel Preparation in Abdominal, Laparoscopic and Vaginal Surgery

Amy Arnold, Lucy Aitchison, Jason Abbott

#### Background

MBP is used by all surgical specialties prior to surgery with the aim of reducing post-operative patient complications including anastomotic leak and to improve surgical view at laparoscopy.

#### Methods

A systematic literature search using the PRISMA guideline was undertaken using MEDLINE, EMBASE, GoogleScholar, The Cochrane Central Register of Controlled Trials and PubMed to identify all relevant articles comparing the clinical outcomes of MBP versus no-MBP and MBP versus single rectal enema in adults. Extracted articles were evaluated according to the GRADE system. Results: 43 studies were identified in colorectal, gynaecological, urological and thoracic surgery: 38 comparing MBP to no-MBP (20 RCTs, three prospective and 15 retrospective cohort studies) and 5 comparing MBP to a single rectal enema (three RCT, one prospective and one retrospective cohort study). Studies in colorectal surgery focused on patient outcomes such as anastomotic leak and infectious morbidity and MBP did not improve patient outcomes. Gynaecological studies predominantly investigated surgical field of view and patient side effects from MBP. The gynaecological studies found surgical field of view was not enhanced by MBP and patients experienced significant discomfort from MBP.

#### Conclusions

Regarding gynaecological surgery specifically, MBP does not improve the surgical field of view in laparoscopic or vaginal procedures and increases patient discomfort. When findings from colorectal surgery are extrapolated to gynaecological surgery, there is no reduction in patient morbidity in the instance of inadvertent bowel injury. Evidence from high quality studies across surgical specialties suggests that the use of pre operative MBP should be abandoned.

### Incidence of malignancy and fibroid variants at surgery for presumed benign symptomatic fibroids

Pui-Wan K Chan<sup>1</sup>, Monique Cebola<sup>1</sup>, Catarina W Ang<sup>1</sup>

*1. Obstetrics and Gynaecology, Royal Women's Hospital, Melbourne, Victoria, Australia*

#### Aim

To determine the incidence of malignancy and fibroid variants at surgery for presumed benign symptomatic fibroids, and to evaluate clinical outcomes following morcellation.

#### Methods

10 year retrospective audit of hysterectomy and myomectomy procedures for symptomatic fibroids with review of histopathology.

#### Results

From 2004-2013, 1115 hysterectomies and 376 myomectomies were performed under the Gynaecology 1 Unit for presumed benign disease at the Royal Women's Hospital.

Clinical history and histopathology review of these yielded 1149 cases of symptomatic fibroids. Unexpected gynaecological malignancies included 3 cases of endometrial stromal sarcoma (ESS - 0.26%), no cases of leiomyosarcoma, one case of endometrioid adenocarcinoma of the endometrium and one case of adenosarcoma of the endocervix. The rate of ESS was comparable to other findings in the recent literature. There were also three cases of unexpected non-gynaecological malignancies. Overall, 0.70% of cases had an unexpected malignancy. Furthermore, 4 smooth muscle tumours of uncertain malignant potential (STUMPs - 0.35%) and 55 cases (4.8%) of benign fibroid variants were also identified.

All of the malignancies and STUMPs were referred to relevant Oncology Units and received follow up and further treatment as appropriate.

As a secondary aim, the incidence and outcomes of morcellation were evaluated. 712 cases (62.0%) involved morcellation (542 [47.2%] manual; 68 [5.9%] power; 102 [8.9%] hysteroscopic). Two of the gynaecological cancer cases involved manual morcellation to optimize surgical access and did not result in upstaging of the cancer. One of the four cases of STUMPs involved manual morcellation, but none have had documented disease recurrence to date.



Of note, two cases of cellular leiomyoma involving manual morcellation at open surgery subsequently represented with clinically significant disease – one with life-threatening intracardiac leiomyomatosis and another with benign metastasizing leiomyomatosis to the lung. This rate was higher than expected (10% of cellular fibroid variants).

#### Conclusion

In our study population, there was a low but significant rate of unexpected uterine malignancy in surgery for benign fibroids consistent with recent studies, and a higher than expected incidence of clinically significant disease associated with benign fibroid variants. Clinical outcomes may be affected by morcellation and may have been observed in a small proportion of cases of benign fibroid variants.

## Quality of Life after Laparoscopic Mesh Sacrocolpopexy - Prospective outcomes at 6 weeks and 1 year post-operatively

Brian Tsai<sup>1</sup>, Joanne McKenna<sup>1</sup>, Trupti Kanade<sup>1</sup>, David Rosen<sup>1</sup>, Danny Chou<sup>1</sup>, Greg Cario<sup>1</sup>

1. Sydney Women's Endosurgery Centre, Sydney, New South Wales, Australia

Sacrocolpopexy is generally considered the gold standard for treatment of apical pelvic organ prolapse. There is recent evidence showing that both laparoscopic and robotic sacrocolpopexies (LSC and RSC respectively) have comparable anatomic restoration and subjective cure rates as the open abdominal procedure. Quality of life in the areas of bladder, bowel, and sexual function are also shown to improve 1 year after a laparoscopic sacrocolpopexy. We decided to prospectively examine prolapse-related symptoms along with sexual and bowel functions post-LSC.

All patients scheduled for LSC with and without hysterectomy, anti-incontinence or other prolapse surgery were invited to complete a questionnaire booklet about their symptoms in relation to sexual, bowel function and general quality of life measures. Operative details and POP-Q scores were recorded in theatre and the patient was discharged with another booklet to be completed prior to their 6 week follow-up appointment. An additional questionnaire booklet was mailed out to the patients at one-year after their surgery.

55 women completed the questionnaire and were included in the analysis. The 6-week post-operative questionnaire was completed by 82% of the patients (45/55). 17 returned the 1-year post-operative questionnaire. In addition to quality of life questions, past surgical, medical and obstetric history was recorded, along with BMI.

25% of these 55 women had LSC only. 49% underwent a concurrent total laparoscopic hysterectomy. 27% also had laparoscopic Burch colposuspension, while 25% had other prolapse procedures including laparoscopic paravaginal repair and posterior repair/perineorrhaphy.

Paired-t tests on the pre and post-operative answers demonstrated a statistically significant improvement in feelings of prolapse and externally palpable prolapse (p-value <0.05), which is expected as that is the primary desired clinical effect of LSC. This effect persists at one-year post-operatively. General quality of life influenced by vaginal symptoms was also statistically significantly improved.

Improvements of larger magnitude that were statistically non-significant were sexual functions at 1-year. No statistically significant improvement or worsening in bowel function after LSC was demonstrated.

We conclude that at 1-year post-op, LSC does improve prolapse and general quality of life, whereas a bigger sample of patients may be required to show an improvement in sexual function. There is no deleterious effect on bowel functions after LSC, with no worsening of constipation. We aim to continue with the prospective collection of data on these areas of interest. As well, once robotic sacrocolpopexy cases are performed in the future, the questionnaires will be administered to help provide evidence on the effects of RSC on quality of life.

1. Lee RK et al. A review of the current status of laparoscopic and robot-assisted sacrocolpopexy for pelvic organ prolapse. *Eur Urol.* 2014 Jan 8. pii: S0302-2838(13)01492-9. [Epub ahead of print]
2. Perez T et al. Laparoscopic sacrocolpopexy for management of pelvic organ prolapse enhances quality of life at one year: a prospective observational study. *J Minim Invasive Gynecol.* 2011 Nov-Dec;18(6):747-54.
3. Salamon CG et al. Sexual function before and 1 year after laparoscopic sacrocolpopexy. *Female Pelvic Med Reconstr Surg.* 2014 Jan-Feb;20(1):44-7.

## Biopsy of uterine tumour and frozen section histopathology prior to laparoscopic morcellation – a pilot study

Alex Ades, Phoebe Hong, Kim C Dobromilsky, David Machet

#### Background

Uterine sarcoma has a very low incidence. Nevertheless, morcellation to remove what was initially thought to be a benign tumour, can be associated with disease spread and change in staging. To date the only reliable test for determination of the type of myometrial tumour is histological analysis. Previously 2 case studies involving this type of pre-morcellation biopsy have been published.<sup>1</sup>

## Aims

To determine the accuracy and feasibility of obtaining biopsies of uterine tumours for frozen section analysis at the time of surgery prior to laparoscopic morcellation.

## Methods

A prospective cohort study of consecutive patients undergoing laparoscopic myomectomy or hysterectomy. Eligible patients had tumours or total uterine size requiring the use of power morcellation for removal. Biopsies were taken using the laparoscopic harmonic scalpel (Ethicon), see video for technique. All cases were pre-arranged with the Pathologist for specimen collection and transport. Results were provided via telephone directly to the operating surgeon. Frozen section specimens were then compared with permanent formalin-fixed tissue sections.

## Results

Twelve patients had frozen section analysis prior to morcellation during the study period, 3 for myomectomy and 9 for hysterectomy. In 9 of the patients a clear diagnosis of benign leiomyoma was provided via frozen section and confirmed with formalin-fixed tissue in the final report. In 2 cases the frozen section included degenerate stromal tissue (one of which was also hyalinised and calcified). That made a definitive diagnosis more difficult but both cases were reported as benign on the frozen section. Both of these were confirmed as benign leiomyomas on the final report.

In one hysterectomy the frozen section reported adenomyosis. The final report confirmed extensive adenomyosis with leiomyomata.

## Conclusion

Uterine tumour biopsy for frozen section prior to morcellation appears to be a safe and effective means for histological diagnosis of pathology prior to morcellation. Difficulties can arise for the pathologist if the tumour is degenerated. When the pathologist was confident to report the tumour as benign that was always confirmed by the final paraffin specimen.

1. *Tulandi T, Ferenczy A. Biopsy of Uterine Leiomyomata and Frozen Sections Before Laparoscopic Morcellation. J Minim Invasive Gynecol. 2014;21:963-966.*

## Short Term Failure Rate of Laparoscopic Excision of Endometriosis: A Case Series

**Keryn Harlow<sup>1</sup>**, John Short<sup>1,2</sup>, Megan Murdoch<sup>1,2</sup>

1. *Christchurch Women's Hospital, Christchurch, New Zealand*
2. *Oxford Women's Health at Forte, Christchurch, New Zealand*

## Aim

To assess the short term failure rate of laparoscopic excision of endometriosis.

## Method

A Retrospective case note review of a single surgeon series. Cases were identified from a review of surgical waiting lists at a private gynaecology clinic in Christchurch. Entry criteria were women with symptoms of endometriosis who underwent laparoscopic excision of suspected lesions and follow up information was available for a minimum of 3 months postoperatively. Data collected included details of age, stage of disease, proportion of positive histology specimens, previous surgery, outcome of treatment at follow up and details of any subsequent surgery. Treatment failure was defined as the patient reporting no or minimal symptomatic benefit from surgery at 3 months follow up. Comparison was made between women who had previously undergone excision of endometriosis or not and for women whose histology was negative or positive.

## Results

50 cases were identified over the time period of March 2010 to August 2014. 12 women had undergone previous surgery for endometriosis. The age range was 15-46. Mean age was 28.5, median 30. Overall 9/50 (18%) women experienced no or minimal symptomatic benefit from excisional surgery. 9/38 (23.7%) women having their first operation did not experience benefit. All women (12/12) who had undergone previous surgery for endometriosis experienced benefit from surgery. 6/50 (12%) had no histological evidence of endometriosis. 3 (50%) of these women had failed treatment. Therefore 3/9 (33%) of women with failed surgery had negative histology vs 3/41 (7%) who had successful treatment. Overall 139 individual specimens were excised, of which 112 (80%) were positive. 14 (28%) women underwent further surgery. If time allows, further details of this group will be available for presentation.

## Discussion

In this series, approximately 1/4 of women undergoing their first procedure for excision of endometriosis had no or minimal improvement in symptoms. Not surprisingly the rate of failure was higher amongst women with negative histology. There were no differences in age or stage. All of those women who had previously undergone surgery benefitted from the surgery. Overall the correlation between surgeon opinion and histology was high. Despite some limitations this review provides information that will be useful for counselling patients with suspected endometriosis and will also be used to help design a larger and more robust long term follow up study.



## Laparoscopic surgery for colorectal endometriosis: An Australian series of 307 cases

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4. Department of Women's and Child Health, Liverpool Hospital, Sydney, NSW, Australia
5. Department of Surgery, Bankstown-Lidcombe Hospital, Sydney, NSW, Australia
6. Department of Surgery, St Vincent's Hospital, Melbourne, VIC, Australia

### Introduction

Colorectal involvement is estimated to occur in up to 12% of cases of endometriosis.<sup>1</sup> Various surgical options for its management have been described, including segmental resection and disc excision, with debate surrounding indications for surgery and the impact of such procedures. The current study aimed to describe the surgical experiences of three Australian gynaecologists to consider the effect of laparoscopic bowel surgery for colorectal endometriosis.

### Methods

The records of three gynaecological surgeons were analysed for patients who underwent surgical removal of colorectal endometriosis by way of appendectomy, bowel disc excision and/or anterior segmental resection between 1999 and 2012. Surgery was performed as described in an existing series.<sup>2</sup>

### Results

A total of 307 patients were identified. The average patient age at the time of surgery was 34.8 years (range 18-51). Amongst these, 192 women (62.5%) presented with pelvic pain or dysmenorrhoea as their primary complaint, 27 (8.8%) with infertility, and 80 (26.1%) with pain and infertility. Information was unavailable for 4 patients (1.3%). A further 4 patients presented for other reasons.

Sixteen (5.2%) underwent appendectomy, 146 (47.6%) underwent disc excision, 126 (41.0%) underwent segmental resection and 19 (6.2%) underwent simultaneous procedures. The majority of procedures were performed laparoscopically (265 of 307; 86.3%). Nineteen procedures (6.2%) were planned laparotomies due to the known extent of disease. Twenty-three procedures were converted from laparoscopy to laparotomy, equating to a conversion rate of 7.5%. Two hundred and sixty-five procedures to remove additional sites of endometriosis were performed concurrently with bowel surgery. A further 77 procedures, not primarily for endometriosis, were also conducted.

Complications occurred in 35 of the 307 cases, equating to a complication rate of 11.4%. Sixty-seven women amongst the 122 wishing to conceive post-operatively achieved at least one pregnancy, equating to a pregnancy rate of 54.9%. Of the 84 pregnancies achieved amongst the 67 women who conceived, 49 (58.3%) were achieved through IVF or ICSI, and 31 pregnancies (36.9%) were conceived spontaneously. This information was unavailable for 4 pregnancies (4.8%).

### Conclusions

The current series demonstrates that laparoscopic surgery for severe disease is feasible in specialised centres. Furthermore, such surgery may have a positive impact upon post-operative fertility. Research into the optimal management of this clinically-challenging condition must continue, with a particular focus upon surgical complications and fertility outcomes.

1. Darai E, Bazot M, Rouzier S, et al. Outcome of laparoscopic colorectal resection for endometriosis. *Curr Opin Obstet Gynecol* 2007; 19:308-13.
2. Wills H, Reid G, Cooper M, et al. Bowel resection for severe endometriosis: an Australian series of 177 cases. *ANZJOG*. 2009; 49: 415-8.

## Improving care of Women with Endometriosis. Exploring the Knowledge and Perception of Endometriosis in Australia and the Impact of Endometriosis on Partners.

Devini Ameratunga<sup>1</sup>, Pradeesha Hettiarachchi<sup>1</sup>, Fleming Tina<sup>1</sup>, Angstetra Donald<sup>1</sup>, Sneddon Anne<sup>1</sup>

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### Background

Endometriosis is a common gynaecological condition affecting around 10% of women of reproductive age<sup>1</sup>. Research shows that the average cost of endometriosis per woman per year due to direct and indirect healthcare costs is as high as €9,579 (approximately \$12000AU)<sup>2</sup>. Despite the high prevalence and societal financial burden, there is limited awareness of the condition in the general public, which may contribute to significant delays in diagnosis of between 7 and 10 years<sup>3</sup>. Little research has been directed at the impact of endometriosis on couples and families, however there is some data indicating the diagnosis can have a significant effect on intimate relationships.

### Aim

The aim of this study was to explore the understanding of endometriosis in the general public and to explore the understanding and impact of endometriosis on the partners of women who have a surgically confirmed diagnosis of endometriosis.





## Design

Qualitative survey of 50 partners of women with histologically confirmed endometriosis, and a qualitative cross-sectional survey of 200 people of the Australian general public.

## Setting

South East Queensland

## Results

Poor awareness of endometriosis was confirmed in the general public, with only half of the surveyed cohort reporting having even heard of the condition, and just 45% identifying endometriosis as a potential cause of pelvic pain in women.

Partners of women suffering from endometriosis report feelings of worry, anger and frustration, and over a third of men report an affect on their working life. A large percentage of partners report that endometriosis affects their day-to-day lives (65%), relationships (52%) and sex lives (70%). Moreover, there are a significant proportion of partners who do not understand the disease (62%) and feel they do not have support as a couple (87%).

## Conclusion

Public awareness of endometriosis is low, and potentially contributes to morbidity and financial costs associated with delays in diagnosis. Given the prevalence of this condition and its demonstrated social and financial ramifications, the role of a public health campaign to increase knowledge for the general population should be explored.

This data is the first of its kind in Australia to review the burden of endometriosis on the male partner, and has demonstrated a significant impact in all areas from finances through to relationships. Health professionals should be aware of the involvement of the partner in the disease and treatment process, and should aim to provide tailored information about the disease to both parties.

1. Rogers PA, et al. Priorities for endometriosis research: recommendations from an international consensus workshop. *Reprod Sci* 2009;16(4):335-46
2. Simoons S, et al. The burden of endometriosis: costs and quality of life of women with endometriosis and treated in referral centres. *Hum Reprod* 2012; 27(5):1292-9
3. Nnoaham KE, et al. Impact of endometriosis on quality of life and work productivity: a multicenter study across ten countries. *Fertil Steril* 2011;96(2):366-373

## Retrospective clinical audit comparing outcomes of Magnetic Resonance Guided Focused Ultrasound (MRgFUS) in the treatment of submucosal uterine fibroids and all other fibroid types at the Royal Women's Hospital Melbourne.

**Marina Demyanenko<sup>1</sup>**, Rebecca Szabo<sup>1</sup>, Andrew Dobrotwir<sup>1</sup>, Catarina Ang<sup>1</sup>

*1. Obstetrics and Gynaecology, Royal Women's Hospital, Melbourne, Victoria, Australia*

## Background

Fibroids (leiomyomas or myomas), the most common female pelvic tumour, are benign tumours that arise from individual smooth muscle cells. Fibroids are clinically found in up to a quarter of all women (Buttram 1981), however the true incidence is thought to be as high as 20-40% in women of reproductive age. Although fibroids are asymptomatic in most women, symptoms that have been attributed to uterine fibroids include heavy menstrual bleeding, pain, pressure type symptoms (i.e. on the bladder) and infertility. A number of treatment options are available including both medical and surgical modalities. Given the young female population affected by fibroids the need for fertility preserving treatment options is becoming increasingly more important and MRgFUS provides one such treatment alternative.

## Aim

To review all cases of uterine fibroids treated by MRgFUS at the Royal Women's Hospital Melbourne between 2009-2013 specifically comparing outcomes of submucosal fibroids with all other fibroid types. Outcomes included treatment success, which was defined by a greater than ten percent reduction in symptom severity score measured at four and 12 months post-treatment and fibroid volume shrinkage greater than or equal to ten percent.

## Methods

A retrospective clinical audit was undertaken of 204 women who underwent treatment with MRgFUS over the initial 52 months of MRgFUS use at the Royal Women's Hospital Melbourne. Patients were identified through a database maintained by the Radiology department and data regarding demographics, clinical characteristics and treatment outcomes were obtained through the clinical results database and individual patient hospital records.

## Results

Of the 204 patients identified, 113 (55.4%) patients were successfully treated by MRgFUS with a decrease in symptom severity score at 4 months (24 patients were lost to follow up or had incomplete data, 11 patients did not tolerate treatment), whilst at 12 months 95 (46.6%) patients were considered to have been successfully treated (49 patients were lost to follow up or had incomplete data). Nine patients (4.4%) required further intervention despite treatment with MRgFUS including either hysterectomy or open, laparoscopic or hysteroscopic myomectomy.



When looking at only the 131 people that completed treatment and had complete follow-up, submucosal fibroids (LSM1/LSM2) were identified and treated in 57 (43.5%) patients. Treatment was successful in 43 (75.4%) and 44 (77.2%) patients at 4 and 12 months respectively. The remaining 74 patients had non-submucosal fibroids and in this population treatment was successful in 50 (67.6%) and 43 (58.1%) at 4 and 12 months respectively.

#### Conclusion

Although non-submucosal fibroids initially showed a greater response rate to MRgFUS at 4 months, the 12 months success rate was significantly lower in this group. MRgFUS provides a safe and fertility preserving treatment alternative in selected cases of non-submucosal fibroids. Further studies are required to more fully determine long-term outcomes and optimal patient characteristics for MRgFUS.

## Risk of Uterine Body Malignancy: A Monash Health Retrospective Audit

**Avelyn Wong<sup>1</sup>**, Roni Ratner<sup>1</sup>, Tom Manley<sup>1</sup>, Haider Najjar<sup>1</sup>, Jim Tsaltas<sup>1</sup>

1. *Gynaecology Endoscopy Unit, Monash Health, Melbourne, Victoria, Australia*

The recent FDA warning addressing the use of power morcellation has sparked great debate. The FDA estimates 1 in 350 women undergoing hysterectomy or myomectomy for the treatment of fibroids is found to have an unsuspected uterine sarcoma. This is concerning for a tertiary referral centre performing a large number of minimally invasive procedures for management of fibroids. We undertook a retrospective analysis of all hysterectomies and myomectomies over a 16 year period to evaluate the incidence of unexpected uterine neoplasms. Patient demographics, preoperative workup and operative indication were examined. These results as well as a review of current literature regarding the investigation and management of uterine fibroids will be discussed.

1. *AAGL Practice Report: Morcellation During Uterine Tissue Extraction. J Minim Invasive Gynecol. 2014;21:517-30*

## Promenade 2&3

### FREE COMMUNICATION SESSION B

## Bowel and bladder function after surgery for endometriosis involving bowel

**Ruth Cameron-Jeffs**, Aileen Yen, Susan Shedda, Martin Healey, Hugo Fernandes, Kasia Michalak

The prevalence of endometriosis is estimated to be around 10% in women of reproductive age<sup>1</sup>. Endometriosis involving bowel may cause considerable problems for women with this disease. Pain, bowel and bladder dysfunction may be experienced to variable degrees with similarly varying consequences on quality of life. The surgical treatment of endometriosis involving bowel is a rapidly expanding area of interest in endometriosis-related research with increasing numbers of women undergoing complex operations in the hope of improving symptoms.

Until recently<sup>2</sup> few have examined the role of bladder function in those women having surgical treatment for bowel endometriosis however it remains a clinically important area in our understanding of the pathophysiology and management of this disease.

In our retrospective study of a large group of women who underwent endometriosis surgery we have examined comprehensive data pertaining to patient characteristics, disease status, treatment, bowel and bladder function and quality of life to compare outcomes between those who did and did not have treatment of bowel disease.

We identified 514 women who underwent surgery between 2008 and 2013 in a large tertiary teaching hospital and a private practice. Data was collected using a mail-out survey. Outcomes were assessed using validated tools including the Cleveland Clinic Incontinence and Constipation Questionnaire, Five-item Obstructive Defecation Syndrome Questionnaire, Visual analogue scales for pain symptoms, The EuroQol Questionnaire and Core Lower Urinary Tract Symptom Score (CLSS) Questionnaire.

Preliminary results indicate a response rate of around 35%.

We aim to clarify the effect of bowel surgery on bladder function in women with bowel endometriosis as part of a project evaluating bowel, bladder and quality of life outcomes.

1. *Ozkan S, Murk W, Arici A. Endometriosis and Infertility. Epidemiology and evidence based treatments. Annals of the New York Academy of Sciences 2008;1127:92-100*

2. *Li Y.H et al. Bowel and bladder function after resection of deeply infiltrating endometriosis. ANZJOG. 2014, 54: 218-224*



## Making the diagnosis of endometriosis in hispanic women: How differing diagnostic criteria alter prevalence rates

Claire Templeman

### Objective

To determine the prevalence of endometriosis in Hispanic women undergoing laparoscopy for benign gynecologic conditions.

### Design

Cross sectional study.

### Setting

A county-based tertiary academic hospital.

### Patient(s)

Two hundred and sixty-nine Hispanic women undergoing laparoscopic surgery for benign gynecologic indications.

### Intervention(s)

Video recording of laparoscopic surgeries in 100 prospectively enrolled subjects (VIDEO subjects)

### Main Outcome Measure(s)

The prevalence of endometriosis based on operative report, histopathology and video review of laparoscopy.

### Result(s)

In all subjects, prevalence of endometriosis was 29% (77/269) by operative report and 22% (58/269) by histopathology. The prevalence was 50% (46/92) in the patients who underwent video. Agreement between the operative note (OPNOTE) and histopathology report (PATH) was 87.7% but in 9.7% of patients the OPNOTE was positive but the Path was negative due to an absence of surgical biopsy in the majority of cases. In seven cases (2.6%) the OPNOTE was negative but the PATH report was positive and in five of these the video also showed gross endometriosis.

### Conclusion(s)

The prevalence of endometriosis in Hispanic women undergoing laparoscopy for benign gynecologic diseases at a tertiary referral center varied significantly depending on how the diagnosis was made. Attention to the accurate documentation of surgical findings may assist in accurately defining the prevalence of endometriosis.

### Key Words

endometriosis, Hispanic, prevalence, laparoscopy, video

## Value of second line conservative surgery for symptomatic cases of recurrent endometriosis

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Although surgery is considered the treatment of choice for managing symptomatic endometriosis, post-operative symptomatic recurrence of endometriosis has been encountered frequently in gynecology outpatient clinics. According to the available data, recurrence rate of symptoms after the first conservative surgery is 20 %and 40% in 2 and 5 years respectively while after the second surgery is about 15% to 20% (Human Reproduction Update, Vol.15, No.4 pp. 441-461, 2009).

### Objective

To evaluate the value of repeat conservative surgery for endometriosis.

### Method

Retrospective analysis of 14 women recruited from the database of Waikato Hospital. All patients had undergone at least 2 laparoscopic excision of endometriosis from 2001 to 2014. Total number of laparoscopic excision of endometriosis in that time period was 398 cases performed by the same surgical team. 55 patients were re referred to outpatient clinics for persistence or recurrence of symptoms. 14 patients received a second conservative surgery.

### Inclusion criterion

- 1- Histological evidence of endometriosis on surgery 1.
- 2-Patients who had 2 or more procedures performed by the same surgical team.

### Results

Retrospective analysis of the 14 patients included

- 1- Disease severity diagnosed at surgery 1:  
(Stage 3: 21%), (stage 2: 50%), (stage 1: 28 %)





2- Improvement of symptoms after surgery1  
(Minimal to No 35%), (Moderate 42%), (Marked 21%)  
3- Hormonal treatment after surgery1  
No hormonal treatment 35%, Mirena/OCP 64%  
4-Pregnancy after surgery1  
3 patients (21%)  
5-Endometriosis staging at surgery 2  
(6 pts Improved 43%), (7 pts stayed the same 50%), (2 pts progressed 15%)  
6- Histological confirmation of endometriosis after surgery 2  
(10 patients +ve histology 71%), (4 Patients -ve 29%)

#### Conclusion

1- 5 of 14 patients reported no improvement of symptoms after surgery 1. 4 of those 5 patients (80%) still reported no improvement after surgery 2. Two of those 4 patients had negative histology for endometriosis in surgery 2.  
2- 9 of 14 patients reported moderate to marked improvement of symptoms after surgery 1. 6 of those patients (66%) still reported satisfactory improvement of symptoms after surgery 2 in 3 – 5 years follow up.  
3- 9 of 14 patients used hormonal treatment between surgery 1 and 2.  
4- According to this small study, there is a role for a second conservative surgical procedure especially with symptomatic improvement after surgery 1; however a bigger multicenter study is warranted to provide a bigger sample size.

## What is the role of prophylactic antibiotics therapy in NovaSure endometrial ablation? A 4-year retrospective audit

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#### Objective

NovaSure endometrial ablation procedure (NEAP) is a one-time, customised treatment for women who suffer with abnormal uterine bleeding (AUB), which uses radiofrequency impedance-based technology. Currently, there are no published guidelines about prophylactic antibiotic therapy for NEAP or other hysteroscopic procedures.

#### Design

We performed a retrospective audit of 99 cases from January 2010 to March 2014 undergoing NEAP for the management of AUB. In three cases we were not able to proceed with NEAP due to technical issues and one case was lost to follow up. All cases were followed up for 6 months after the procedure.

#### Results

Prophylactic antibiotics were given to 77 cases (81%) and 18 did not receive antibiotics (19%). Of the ninety-five patients, 4 cases developed endometritis, which were treated with oral antibiotics in three of the cases and one was admitted as an inpatient for intravenous antibiotic therapy. This gives an overall infection (endometritis) rate of 4.2%.

We found that all 4 patients who developed post-op infection were those who received antibiotics i.e. four out of seventy-seven (5.2%) and none of those who had NEAP without prophylactic antibiotics developed post-op infection. Review of case notes revealed post-op antibiotics were given to 58 patients upon discharge from day surgery and 37 did not receive any antibiotics. Of the 4 cases of endometritis, only one was in the post-op antibiotic group and the other three were not given any antibiotics.

At six months follow up, fifty-two cases reported amenorrhoea and thirty-four cases reported either light or very light periods. This gives an amenorrhoea rate of 54% at six months for this unit.

Eighty-six patients out of 95 evaluated the results of NEAP satisfactory (90.5%).

#### Conclusion

The evidence for prophylactic antibiotic therapy for NEAP is lacking. American Congress of obstetricians and gynecologists and RANZCOG both point out in their practice bulletin and statement, respectively that there is no clear evidence to recommend prophylactic antibiotic therapy for hysteroscopic procedures.

Our retrospective review of case notes casts further doubt on the usefulness of prophylactic antibiotic therapy. However, lack of blinding and historic examination of the data makes our review subject to obvious bias that exists with retrospective reviews. Ideally, a double-blind randomised-controlled trial should provide higher level of evidence regarding the above debate.

1. *ACOG practice bulletin No. 104: antibiotic prophylaxis for gynecologic procedures. Obstet Gynecol. May 2009; 113(5): 1180-9*  
2. *RANZCOG statement C-Gen 17: Prophylactic antibiotics in Obstetrics and Gynaecology, November 2012.*  
<https://www.ranzcog.edu.au/college-statements-guidelines.html>

## Utilisation and Cost Effectiveness of the Outpatient Hysteroscopy Service at Middlemore Hospital, South Auckland, New Zealand.

Sarah Corbett<sup>1</sup>

1. *CMDHB, Auckland*

### Introduction

The aim of this prospective study was to examine the utilisation and cost effectiveness of the outpatient hysteroscopy clinic at Middlemore Hospital, South Auckland, NZ. The outpatient hysteroscopy service was set up 2 years ago, to rapidly assess women in the outpatient setting, without the need for general anaesthetic and its attendant risks, with the added advantage of reduction in costs from a reduction in theatre use.

### Methods:

Prospective demographic data, history, assessment and final histology, was entered onto a Microsoft Excel spreadsheet, for all women attending the clinic over a 12 month period for the year 2013.

### Results

There were 302 women referred to the outpatient hysteroscopy clinic. Following hysteroscopy 158 were discharged or waitlisted for definitive surgery including hysterectomy. 124 were booked for a subsequent inpatient hysteroscopy, of whom 61 had polyps (49%), 26 cervical stenosis or difficulty tolerating outpatient hysteroscopy (21%), 14 due to clinical concern re malignancy or need for more extensive sampling (12%), 9 a sub mucous fibroid (7%), 6 declined outpatient (5%), 4 were not attempted (3%) and 4 had an unsatisfactory view or technical issues (3%). A further 14 were referred to alternative clinics. Most patients (89%) had an USS prior to hysteroscopy clinic, however we found USS was a poor predictor of polyps, with a PPV of 0.44, NPV of 0.95, sensitivity of 0.08, and specificity of 0.95. For women who had an unsuccessful outpatient hysteroscopy due to cervical stenosis or discomfort the majority 43/45 (93%) were postmenopausal. Of postmenopausal women with an unsuccessful hysteroscopy, nulliparity was more common (16% versus 8%) this was not statistically significant (CI -0.02 – 0.22). An inpatient hysteroscopy is costed as \$2765.90. It is more difficult to quantify cost of an outpatient hysteroscopy but we estimate this to be \$350.

To encourage the latter approach, we believe future strategies include introduction of versapoint bipolar electrosurgery system to enable polyp removal as an outpatient. In this study, introduction of this technology would have potentially saved \$2415.90 per patient, which would have amounted to savings of \$147,369.90 over 2013.

## The responsiveness of adenomyosis to medical and surgical treatments

Blake Knapman<sup>1</sup>, Jason Abbott

1. *The Royal Hospital for Women, Randwick, Gunnedah, NSW, Australia*

Adenomyosis is defined as the presence of heterotopic endometrial foci within the myometrium accompanied by stromal and smooth muscle hyperplasia. Symptoms are non-specific but are typically characterised by menorrhagia, dysmenorrhoea, and uterine enlargement with one third of women remaining asymptomatic.

Advances in medical imaging have facilitated non-invasive diagnosis. Transvaginal ultrasound (TVUS) and magnetic resonance imaging (MRI) allow evaluation of myometrial invasion with sensitivities of 72% and 77% and specificities 81% and 89% respectively<sup>1</sup>. Both modalities evaluate disruption to the endomyometrial interface (or junctional zone) however depth of endometrial infiltration required for diagnosis is poorly defined and distorted by body habitus and the presence of fibroids. Consequently, histological diagnosis remains the gold standard and is achieved at hysterectomy or ultrasound guided biopsy as a minimally invasive alternative.

Oral progestogens and combined oral contraception have played an important role in the medical management of menorrhagia and dysmenorrhoea associated with adenomyosis and other causes of abnormal uterine bleeding (AUB). Progestogen induced endometrial atrophy is associated with marked improvement in pain and bleeding however 50% of patients experience recurrence by 6 months<sup>2</sup>. Levonorgestrel-releasing intrauterine devices (Mirena) are inexpensive, well tolerated and achieve symptom control for approximately three years. GnRH antagonism results in hypoestrogenaemia and is proven effective in the reduction of chronic pelvic pain associated with adenomyosis. Combination GnRH-a-Mirena therapy performed as a staged procedure has been shown to enhance patient response, result in prolonged uterine involution and reduced rates of IUD expulsion.

Hysterectomy is considered gold standard in the treatment of adenomyosis in women who do not desire uterine preservation and facilitates comprehensive histological assessment. Procedural morbidity in conjunction with increasing maternal age and desire for uterine preservation have resulted in advancements in minimally invasive surgical management. Classical adenomyomectomy and cytoreductive surgery provide 84.6% and 54.6% reduction in dysmenorrhoea respectively, improved bleeding and post-procedural pregnancy rates of up to 60%<sup>3</sup>. While these techniques preserve fertility, they confer an increased risk of uterine rupture during subsequent pregnancies. In instances of superficial disease, defined as less than 12mm of myometrial invasion, second generation endometrial ablation offers excellent results with ultrasound guided techniques described as alternatives in cases of deeper disease.

1. *Champaneria, R, Abedin, P, Daniels, J, Balogun, M, Khan, K 2010, Ultrasound scan and magnetic resonance imaging for the diagnosis of adenomyosis: systematic review comparing test accuracy, Acta Obstetrica et Gynecologica, Vol. 89, pp 1374-1384*

2. Levy, G, Dehaene, A, Laurent, N, Lernout, M, Collinet, P, Lucot, J, Poncelet, E 2013, *An update on adenomyosis, Diagnostic and Interventional Imaging*, Vol. 94, pp. 3-25
3. Grimbizis, G, Mikos, T, Tarlatzis, B 2014, *Uterus-sparing operative treatment for adenomyosis, Fertility and Sterility*, Vol. 101, No. 2, pp. 472-487

## Intrauterine adhesions following hysteroscopic treatment for retained products of conception: what are the risk factors?

**Oshri Barel<sup>1</sup>**, Ayala Krakov<sup>2</sup>, Moty Pansky<sup>2</sup>, Zvi Vaknin<sup>2</sup>, Noam Smorgick<sup>2</sup>

1. Monash Health, Bentleigh East, VIC, Australia
2. obstetrics and gynaecology, Asaf Harofe Medical Center, Zerifin, Israel

### Objective

To assess the prevalence and risk factors for Intra-Uterine Adhesions (IUA) following hysteroscopic treatment of retained products of conception (RPOC).

### Design

Retrospective cohort study.

### Setting

Gynecologic endoscopy unit.

### Patients

167 women referred to our institution from 2009 to 2013.

### Interventions

Operative hysteroscopy for treatment of RPOC and office hysteroscopy follow up to assess for IUA.

### Main Outcome Measures

We investigated demographic characteristics, obstetrics parameters and surgical variables to evaluate which factors could be associated with IUA formation.

### Results

Out of 167 women treated for RPOC, 84 (50.3%) had undergone a follow-up hysteroscopic evaluation after the operative hysteroscopy and were included in the study. IUA were found in 16 (19.0%) cases, of which only 3 (3.6%) were severe adhesions. Multivariate analysis showed that the presence of IUA was associated with RPOC following cesarean section (5/10 [50.5%] developed IUA versus 7/49 [14.3%] following vaginal delivery,  $p < 0.05$ ). IUA were also found in 4/23 (17.4%) women undergoing hysteroscopy for RPOC following abortion. The patients' age, gravidity, parity and the interval between the index pregnancy and treatment for RPOC were not associated with post-operative IUA.

### Conclusion

Hysteroscopic treatment for RPOC had a 3.6% incidence of severe intrauterine adhesions formation in this descriptive series. Women with RPOC occurring after delivery by cesarean section are particularly at risk for development of IUA.

## Comparison of SILS (Single incision laparoscopic surgery) with traditional laparoscopy.

Fariba FBW Behnia-Willison<sup>1</sup>, **Yogender Yadav<sup>1</sup>**, Morven Crane, Robert O'Shea<sup>1</sup>

1. Flinders Medical Centre, Panorama, SA, Australia

### Background

Single port laparoscopic surgery represents the latest advancement in minimally invasive surgery, combining the benefits of conventional laparoscopic surgery, such as less pain, faster recovery, with improved cosmesis. Single port laparoscopy is performed through a single, small skin incision 15-20 mm in size, usually hidden in the umbilicus.

Although single port laparoscopy seems similar to standard laparoscopy, theoretically there are some differences in techniques. To perform the former, some principals of conventional laparoscopy have to be broken in order to avoid crowding of all the working instruments within one incision transumbilically, and the basic principle of triangulation is therefore lost to some extent. The need for specially designed instruments (longer and roticulating) and flexible/ barrelled bariatric scopes may increase the cost and hence be another barrier to the uptake of this technique. When related to inadequate training and experience, these challenges may affect the safety and feasibility of this type of surgery.

### Aim

To evaluate the safety, recovery time, cosmetic and clinical outcomes of single port laparoscopy in gynaecology in comparison to conventional laparoscopy





## Materials and methods

At FBW gynaecology plus we conducted a prospective study with regards to operating time, postoperative analgesia requirement, length of stay, complication rate and cosmetic satisfaction which will be presented in this PowerPoint presentation.

## Results and conclusion

In our hands single port laparoscopy is superior to conventional laparoscopy for some gynaecological pathologies in terms of pain score, length of stay and cosmetic outcome with no increased rate of complication. There is a new learning curve when switching from conventional laparoscopy to single port surgery which should be taken in to consideration before embarking on more complex surgery via single port laparoscopy.

## Total laparoscopic hysterectomy for a large cervical posterior fibroid impacted in the pelvis.

**Lionel Reyftmann**<sup>1,2</sup>, Joanne McKenna<sup>2</sup>, Danny Chou<sup>2</sup>, David Rosen<sup>2</sup>, Greg M Cario<sup>2</sup>

1. Graduate School of Medicine, University of Wollongong, Wollongong, NSW, Australia

2. Sydney Women's Endo Surgery Centre, St George Hospital, Kogarah, NSW, Australia

Large cervical uterine leiomyoma represent a serious technical challenge in case of hysterectomy. Distortion of the pelvic anatomy, compression of the urinary tract organs, and limited ability to mobilise the uterus make the laparoscopic approach difficult. This surgical video presents a total laparoscopic hysterectomy (TLH) for a large cervical leiomyoma causing menorrhagia and anemia.

A 47-year-old G3P0 lady, with a background of secondary infertility, presented with menorrhagia, anemia (Hb= 10.6) and an immobile 20-week-sized uterus. Ultrasound scan showed a bulky uterus (201 X 83 X 74 mm) with multiple fibroids, the largest being located in the lower part of the uterus and measuring 102 mm. Her creatinine level was normal, as well as her LDH (200). An embolization of the uterine arteries was suggested to the patient but declined, and the option of a TLH was chosen. The necessity of a morcellation was explained to the patient, including the potential complications. To further assess the anatomy and decrease the risk of incidental finding of a sarcoma, a pelvic MRI was organized. The largest fibroid in the cervix measured 13.2 x 10.9 cm and demonstrated signs of myxoid degeneration without any locally aggressive features to raise the possibility of uterine sarcoma.

Preparation of the patient included oral iron therapy, autologous blood banking of 2 units and GnRH analogs for 2 months.

On examination under anaesthesia, a large posterior cervical fibroid expanding the posterior vaginal wall pushed the cervix anteriorly and superiorly, cephalad to the pubic symphysis. The markedly displaced cervix rendered the uterine cannulation difficult, and the manipulation limited. Laparoscopic examination showed that the cervical fibroid occupied the whole pelvic cavity, expanding retroperitoneally over the pelvic side walls, and into the rectovaginal space.

The lack of mobility of this difficult fibroid caused a major challenge.

After dividing the upper pedicles of the uterus, bladder dissection was carried out cautiously in the context of very distorted anatomy. Bilateral uterine arteries were carefully searched, thoroughly dissected and ligated at their origin with LigaClips. During the dissection, there was a superficial damage to the left ureter involving the adventitia and the external muscularis. No stent was inserted. The uterus was morcellated with a harmonic hook, to allow the extraction through the vagina and the final weight was close to 1 kg. The patient made an uneventful postoperative recovery and the post-operative urinary tract ultrasound was normal without signs of dilation.

## Session 4 / 1400 - 1600

Promenade 1

ENDOSCOPIC SURGERY FOR THE OBESE, A CHALLENGE TO BE ADDRESSED

## Theatre setup and entry techniques for the morbidly obese

**Stuart Salfinger**

*Abstract not available at time of publication. Please check the conference app for updates.*

## Laparoscopic surgical training, the Japanese method

**Tomonori Hada**

In Japan, there are not so much obesity patients, so today I will present our style of laparoscopic surgical training.



We think to become more skilled surgeon, we need 3 training. Training head, eyes, and hands.

To train head means to build our store of knowledge of anatomy, devices of laparoscopy, simple and advanced power source. To train eyes means to learn techniques of laparoscopy, such as dissection, cutting, ligation, hemostasis, and trouble shooting. But more important is to train hands. It means perform operation by using forceps and it takes a long time to use forceps at will.

In our institution, every GYN doctor has drybox, and trains suturing every day. We value dry box suturing, because suturing technique includes bi-hand coordination, precise maneuver of forceps, and ligation. Laparoscopic suturing techniques are one way to expand the boundaries of minimally invasive gynecologic surgery. It has been our goal to improve suturing skills through training using a dry box and in an animal laboratory in order to master basic suturing and apply those skills to laparoscopic clinical cases. Before mastering intracorporeal suturing, we could only perform simple procedures laparoscopically. With the introduction of fundamental laparoscopic suturing techniques, it became possible to perform an ever expanding number of techniques for various diseases.

After dry box training, we start total laparoscopic hysterectomy (TLH), and myomectomy with senior doctor step by step. And our goal is to perform TLH as an operator in 18 months.

## Weight loss initiatives for the obese patient prior to surgery, controversy or practice?

**Tom Manley**

The overall incidence of obesity is rising and it has been predicted that obesity is likely to overtake smoking as the country's leading health problem. Certainly comorbid conditions such as diabetes and heart disease are more common in the obese population, particularly when BMI is above 40. The available evidence presents conflicting views about the impact of obesity on surgical morbidity with large retrospective studies finding the 'obesity paradox'. So is it even worthwhile encouraging our obese patients to attempt weight loss acutely preoperatively or should this be mandated for benign gynaecological surgery?

1. *Gynecologic Surgery in the Obese Woman. Committee Opinion No.619. American College of Obstetricians and Gynecologists. Obstet Gynecol January 2015*
2. *Mullen JT, Moorman DW, Davenport DL. The obesity paradox: body mass index and outcomes in patients undergoing nonbariatric general surgery. Ann Surg 2009; 250:166-72*
3. *Biswas N, Hogston P. Surgical risk from obesity in gynaecology. The Obstetrician & Gynaecologist 2011;13:87-91.*

## Anaesthetic challenges for the obese patient in laparoscopy

**Richard Barnes**

Increasing numbers of obese (BMI > 30), morbidly obese (BMI > 40) and super obese (BMI > 50) patients are presenting for gynaecological laparoscopic surgery. Evidence regarding management and outcomes is unfortunately almost non-existent. It is possible to extrapolate from studies in laparoscopic bariatric surgery, although even here the evidence is limited and may be falsely reassuring because of the greater challenges of the Trendelenburg position compared with reverse Trendelenburg.

It is important to distinguish the challenges due to obesity per se from those due to the co-morbidities which are commoner with increasing obesity (obstructive sleep apnoea, type 2 diabetes and cardiovascular disease in particular) as well as the longer duration of surgery inevitably associated with operating on obese patients.

Obesity brings very practical challenges for the anaesthetist. Venous access is more difficult, sometimes necessitating ultrasound-guided cannulation. Similarly, airway management may require special techniques, including video-laryngoscopy or even fiberoptic intubation. Patient handling and positioning pose risks for all staff as well as for the patient.

Intraoperatively, the management of pulmonary gas exchange is the biggest anaesthetic challenge. Most research has focused on CO<sub>2</sub> uptake from the pneumoperitoneum and its respiratory elimination. Evidence suggests that these changes are the same in obese and non-obese patients. In any case, concerns around a temporarily elevated arterial CO<sub>2</sub> have been greatly overstated. It is far safer to accept moderate hypercarbia rather than risk pulmonary barotrauma with grossly elevated inspiratory pressures. Maintenance of adequate oxygenation, on the other hand, is much more problematic with increasing obesity. An occasional pause in the surgery, with release of the pneumoperitoneum and head-up tilt, will produce a period of improved oxygenation, allowing surgery to then continue; rarely, laparoscopic surgery must be abandoned.

Suitability of obese patients for ambulatory (day case) surgery is an important question. Below a BMI of 50, limited evidence suggests that raised BMI alone is not an independent risk factor for postoperative complications, so usual criteria of suitability should apply. But once BMI exceeds 50 (super obese), increasing risk of postoperative complications as well as the practicalities of safe management mean that overnight admission to a specialist facility is almost certainly advisable.



## Is uterine artery ligation at its origin safe in the obese patient, the evidence and technique

**Prakash Trivedi**

Laparoscopic Hysterectomy techniques keeps changing, specially with different methods of tackling uterine arteries. 2483 Laparoscopic Hysterectomy done from February 1994 till July 2014 were evaluated for uterine artery hemostasis.

Uterine arteries were tackled at origin from internal iliac artery in 156 cases. Of these, 28 patients were obese BMI (> 30).

A comparative evaluation of tackling uterine artery at the origin from internal iliac artery in obese patients and normal patients was done. We evaluated Ease of trocar placements, lengths of trocar used, visualization of anatomy, and technical ease in carrying out internal iliac artery ligation, bleeding, possibility in difficult pathology & specially ureteric or vesical injury.

Technical difficulties in trocar placement was as anticipated in the obese patients and longer trocars were used for the obese patients. Once instruments were in place further surgical technique was similar in both groups.

We conclude that in obese patients, laparoscopy is a better technique to operate rather than open surgery. Special care has to be taken in instrumentation for obese patients. Once instruments are in place technically obese patients are similar to the non-obese groups for laparoscopy surgeries. Same holds true for uterine artery ligation with no significant differences being found in various surgical and technical parameters compared.

Promenade 2&3

## ADHESIONS MANAGEMENT

### Pathophysiology of adhesion formation

**Simon McDowell**

Adhesions are the abnormal connection between two structures and are commonly encountered in gynaecologic endoscopy. They may develop following surgery or infection. Adhesions are the natural result of a pathological event. They may however cause pathology long after the initial incident.

Adhesions are unintended. In gynaecology they may be completely innocuous but can cause pain and infertility. Where possible adhesion formation should be avoided. To avoid adhesions, and recognise their potential clinical effects, a thorough understanding of their pathophysiology is important.

### The challenge of adhesions prevention, strategies for the surgeon

**Daniel Kruschinski**

#### Purpose

Adhesions are associated to multiple pathologies and are a significant burden to patients, surgeons and the health system, attempts have been made to develop strategies to prevent their occurrence and reformation. Laparoscopy produces less peritoneal trauma than conventional laparotomy and may result in decreased adhesion formation. However, for high-risk laparoscopy, like Endometriosis surgery the outcome of adhesion formation is equal to laparotomy. Either laparoscopy, pneumoperitoneum modulation nor the wide usage of multiple adhesion prevention agents have changed the situation, so the burden of adhesion prevention still remains the same.

Our objective was to investigate the role of adhesion prevention agents, surgical strategies and postsurgical procedures to minimize the postoperative re-formation of adhesions.

#### Methods

Since 1991 we have performed more than 1000 cases of severe Adhesion-Related Disorder using Laparoscopy as well as gasless Lift-laparoscopy with the combination of different Adhesion prevention agents (SprayShield™, Adept™), second and third-look laparoscopies. A special postoperative management was introduced into the concept in the last 5 years.

#### Results

The extent, severity and grade of adhesions were reduced with an overall of 83 % comparing to the initial procedure with the results of the second- and third-look laparoscopy.

#### Conclusion

The procedures show a significant reduction of adhesion reformation. Adhesion prevention strategies and procedures supporting the physiological anti-adhesion formation process need to be taken seriously when trying to prevent reformation of adhesions. We report





about 15 years of experience with second- and third-look laparoscopies plus special surgical strategies and perioperative management. We also discuss the timing of second- and third-look laparoscopies as well as strategies to enhance the physiological ability to prevent adhesion re-formation.

## Intraoperative adhesions, your frequent companion in surgery, guide to management

**Bruno van Herendael**

The problem of adhesion has an incidence and prevalence of 55 % to 95% in open surgery (literature average 85%). The readmission rate in classical surgery lays between 5% and 10% with the exclusive diagnosis of Adhesion Related Disease (ARD). The longer the postoperative follow-up, the more ARD seems the cause of complications. The SCAR (Surgical and Clinical Adhesion Research) study reports that over a period of 10 years 1/3 of the patients is readmitted 2 times up to 4% more frequently (2-5 times). SCAR 2 reports that laparoscopic surgery for the same pathology does not score better than classical surgery. The problem being the trauma, especially to the peritoneum, generating fibrin deposits. When the fibrin deposits are resorbed completely there is no problem of adhesions. When fibrin remains adhesions are fully formed within 5 days. There are no tests available to distinguish which patient will resorb the deposits completely. Therefore care must be taken by the classical techniques not to traumatise the peritoneum or rather to avoid excessive trauma. In endoscopy a underestimated factor is the blowing of gasses over the peritoneum that will cause trauma even without touching the structures. As adhesions are fully formed within 5 days following the surgery we have to take care to separate the different tissues for that period of time and no to long a period after that time interval. First of all every precaution has to be taken during the surgery, the surgical techniques of minimal invasive surgery including conditioning of the peritoneum by the so called full conditioning, reduction of the pressure, allowing as much oxygenation as possible, reducing the temperature and possibly adding oxygen to the CO2. Additional measures are the barriers. In the talk the historical and current barriers will be discussed in light of evidence based outcomes and costs. It results the most expensive, the hydrogels based on polyethylene glycol are the most effective whilst the hydro-flotation anti adhesion barriers seem to have a good but not excellent effect.

## Fertility and Adhesions

**Martin Ritossa**

Adhesions are a huge burden on health care resources worldwide. Endometriosis, pelvic pain, ectopic pregnancy, tubal infertility, intrauterine and extrauterine adhesions at hysteroscopic and abdominal surgery are day to day issues faced by the practicing gynaecologist. With second, third and even fourth caesarian sections becoming common place, adhesion prevention and treatment has now become a clinical issue for the obstetrician as well. For many years we have been taught microsurgical techniques using meticulous hemostasis, minimal tissue ischemia and prevention of infection to avoid new or recurrent adhesions in our patients. Despite this, little is known about the effectiveness of these procedures. With increasing technology the obstetrician and gynaecologist now has a number of options available to them in the battle against adhesions. Additionally there are an increasing number of procedures that may benefit from adhesion prevention techniques. Barrier techniques to prevent adhesions after caesarian section or intrauterine surgery are relatively new concepts and studies are limited. With increasing restrictions on health spending the costs of these products are restrictive but are the costs of not using them greater? This presentation will discuss the role of adhesion prevention in fertility treatment, pregnancy outcome and caesarean section.

## A review of the evidence of adhesion prevention products

**Harry Merkur**

Adhesions and their consequences have long concerned surgeons. Prevention of adhesions relies on good surgical technique – optimal haemostasis, minimising tissue trauma, avoidance of necrosis and use of excessive electrodiathermy, avoidance of spillage of contaminants eg. bowel, dermoid contents and the preference for MIS techniques rather than laparotomy. The role of bacterial infection following surgery is an obvious and important factor that cannot be underemphasised.

The main gynaecological consequences concerning adhesion prevention that have been evaluated include the desire to improve chronic pelvic pain, infertility and the prevention of bowel obstruction. The use of second-look laparoscopy has been the main tool used to evaluate the short term improvement in adhesion recurrence. This assessment has been problematic because of the diverse causes of adhesions eg. myomectomy, endometriosis, previous pelvic surgery, PID. In addition, there is no universally accepted best method for classifying adhesions – extent, density, strength of adhesions, plus adjacent organ involvement.

It has been shown that prevention of adhesions can be achieved, but the long term clinical results for pelvic pain, fertility and bowel obstruction prevention cannot be shown confidently. Anti-adhesion products have been around for a long time, but they are still not providing what we desperately want, and that is reliable, predictable adhesion prevention.

The use of anti-adhesion agents has been extensively reviewed in the Cochrane Database<sup>1</sup>.

These agents are broadly classified into:



- 1) Pharmacological agents eg. heparin, steroids, promethazine
- 2) Barrier agents
  - a. Liquids and gels eg. Spraygel, Adept, Coeseal
  - b. Solid agents eg. Interceed, Gore-Tex, Seprafilm

1. *Ahmad G, Mackie FL, Iles DA, O'Flynn H, Dias S, Metwally M, Watson A. Fluid and pharmacological agents for adhesion prevention after gynaecological surgery. Cochrane Database of Systematic Reviews 2014, Issue 7. Art. No.: CD001298. DOI: 10.1002/14651858.CD001298.pub4.*

Friday 6 March 2015  
**Session 8 / 1145 – 1300**

Promenade 1  
INFERTILITY

### **Is laparoscopy a valid tool in the investigation and treatment of infertility?**

**Resad "Paya" Pasic**

The purpose of this presentation is to summarize the best evidence available in the role of laparoscopy in evaluation and treatment of female infertility. We will describe laparoscopic management of endometriosis, tubal disease and uterine fibroids. The goal is to provide surgeon treating those conditions by laparoscopy with practical guidelines and recommendations in a question and answer format.

Laparoscopy is associated with less blood loss, less postoperative pain, shorter hospitalization, faster recovery, better cosmesis and less postoperative adhesion formation and it is a valuable tool for treating infertile patients.

### **Polypectomy and Septi in the management of the infertile patient, what is the evidence?**

**Stefano Bettocchi**

*Abstract not available at time of publication. Please check the conference app for updates.*

### **The Controversy of fibroid surgery, should intramural fibroids be removed prior to IVF?**

**Ben Kroon**

Intramural fibroids may be associated with poorer reproductive outcomes, yet the presence of such tumours in a woman presenting with infertility is not necessarily an indication for myomectomy.

This talk will outline the current evidence on the effect of intramural fibroids on natural fertility and on assisted reproductive outcomes, and examine the value of fibroid resection prior to fertility treatment.

### **Is there any role for laparoscopic tubal anastomosis?**

**Paul PG**

Female sterilization is a prevalent method of birth control worldwide. However, couples do regret their decision and request reversal of the procedure. It is estimated that 2-13% of women develop post-sterilization regret and 1-3% seek tubal reanastomosis. The treatment options available to these couples are either reversal procedures or assisted reproduction techniques (ART). These patients are usually otherwise fertile and have better success with both procedures. Reversal of tubal ligation is achieved by opening the occluded ends of proximal and distal segments and anastomosing them with fine sutures using magnification and microsurgical techniques. Traditionally, tubal anastomosis has been done by open microsurgical techniques. A review on tubal anastomosis has shown that laparoscopic tubal anastomosis is equally effective as microsurgical procedures by laparotomy. Laparoscopic microsurgery is technically demanding and requires training and experience. The use of one stitch technique, titanium clips, and fibrin glue have been tried recently to circumvent the difficult laparoscopic suturing but the results were not optimal. The goal of laparoscopic surgery should be to duplicate standard microsurgical techniques. Robotic assistance have been evaluated to facilitate laparoscopic tubal anastomosis. Increased cost and operative time are the disadvantages. Author is using 3D laparoscopy for more precise tubal reanastomosis.



Laparoscopic tubal anastomosis gives an intrauterine pregnancy rate of 60-80% and very low ectopic pregnancy rate of 1-6%. Success rate mainly depends on women's age, the type of sterilization; Falope rings and clips give a higher success rate than Pomeroy's and other techniques. Two other prognostic factors associated with success of the procedure were tubal length and type of anastomosis. It is difficult to compare ART with tubal surgery since the probability of an IVF pregnancy is limited by the number of cycles performed. ART is a "palliative" technique whereas tubal surgery is curative. It allows women to conceive naturally, and is therefore an option for couples with ethical and religious concerns. More than one pregnancy is also possible with tubal surgery. ART is much costlier than tubal surgery and many patients cannot afford this treatment. Risks of tubal surgery are very low. Although ART is an outpatient procedure, there is a risk of ovarian hyperstimulation and multiple pregnancy. ART is psychologically very stressful treatment and many discontinue after first attempt. Health of children conceived after ART is another major concern now. Tubal anastomosis should not be considered when final tubal length is less than 4cm, there are significant tubo-ovarian adhesions or stage 3-4 endometriosis, and /or more than mild male factor.

To conclude, Tubal anastomosis for reversal of sterilization has significantly higher cumulative pregnancy rate than ART, and it is more cost efficient, even in women 40 years of age or older.

## Laparoscopic ovarian drilling: Revisited

Hisham Arab

The three main symptoms of women with Polycystic Ovarian Syndrome (PCOS) are: menstruation related disorders; androgen-related symptoms; and infertility. Management strategies depend on the dominant one. The history of management of PCOS has been taking sharp turns from surgical management to medical therapy and later a renewed interest in surgery.

At present, Laparoscopic ovarian drilling (LOD) is indicated in clomiphene (CC) resistant cases and another approach of gonadotropin therapy. In LOD treatment, high success pregnancy rates of around 60 % are expected within 12 months of surgery, and peak pregnancy rate is seen around 6-9 months after surgery.

The exact mechanism of induction of ovulation by LOD is not understood. This may be attributed to the improved intraovarian stromal blood flow following the procedure. It has been suggested that physical opening of subcapsular cysts led to the removal of androgen-containing follicular fluid from the ovarian environment, thus lowering the androgen content of ovaries. The total and free testosterone is decreased to 40-50 % of the preoperative levels. LH levels also decreased following the procedure. Change in FSH levels is less marked and normal inhibin pulsatility is restored. The normalization of hormonal relationships leads to recruitment of a new cohort of follicles and resumption of ovarian function. These endocrine changes occur rapidly and are sustained for years. The number of holes to be drilled depends upon the size of the ovaries and the sonographic appearance which had been noted during the preoperative work-up. In moderately enlarged ovaries, about 10-12 holes are sufficient but more may be required in voluminous ovaries. Treatment patients when followed sonographically show spontaneous ovulation or much more improved sensitivity to CC and lesser chances of multiple pregnancies. Overall LOD is simple procedure with lots of benefits for fertility preservation, but it should be judiciously employed with strict selection protocol.

Promenade 2&3

ONCOLOGY FOR THE GENERALIST

## Ovarian cancer screening, current status and future challenges

Thomas Jobling

Ovarian cancer is a common cause of death from malignancy in women. There is no established screening test available for the detection of early stage ovarian cancer. Even in high risk groups such as BRCA gene mutation groups and patients with mismatch repair gene defects, there is no evidence that screening has allowed the earlier detection or improved survival rates from ovarian malignancy. Efforts at defining ultrasound features of malignancy are of course highly valuable in triaging patients for appropriate surgical approaches in those identified with adnexal abnormalities. Many examples of algorithms designed to determine the safest surgical approach have been constructed, and some of these will be explored. The use of minimal access surgery for removal of suspicious lesions requires the clinician to be able to readily identify high risk lesions, and decide which patients should be afforded minimal access surgery versus those requiring midline laparotomy. A discussion of these concepts will be presented.

## Management of Endometrial Hyperplasia - Controversies and Challenges

Keith Harrison

Endometrial Hyperplasia [EH] is a common diagnosis in our ageing and increasingly obese populations. The condition is widely accepted to be precancerous although data regarding the Natural History of EH is sparse. Prognosis and treatment is based on histological



classification, current systems of which show poor inter observer correlation. Increasing trends to aggressive surgical intervention may not be justified.

This short presentation aims to review the Pathology, Natural History and Classification of EH and to examine the interface between Generalist and Oncologist in management.

## Endometriosis and pelvic cancer, controversy?

Jason Tan

Ovarian carcinomas, especially clear cell and endometrioid adenocarcinomas, are highly associated with endometriosis. Atypical endometriosis shows proliferation activity intermediate to those of typical endometriosis and ovarian carcinoma, suggesting it is a precancerous status<sup>1</sup>. Histopathological studies show the transformation/progression of endometriosis to clear cell carcinomas.

Patients diagnosed ovarian clear cell carcinoma with pelvic endometriosis exhibited a better prognosis than those without endometriosis, especially those patients with stage I cancer<sup>2</sup>.

What is not so clear is that should all demonstrable macroscopic endometriosis in women be removed even if asymptomatic given this relationship of endometriosis with pelvic clear cell cancer? What features would advocate excision? Size or site of disease? Should a hysterectomy and bilateral salpingo-oophorectomy be recommended at menopause if a patient is known to have unexcised macroscopic endometriosis pre-menopausally? Are there any guidelines?

Limited existing evidence will be reviewed and the presentation will attempt to extrapolate some "guidelines", which will no doubt create controversies.

1. Ogawa, S., Kaku, T., Amada, S., & Kobayashi, H. (2000). Ovarian Endometriosis Associated with Ovarian Carcinoma: A Clinicopathological and Immunohistochemical Study. *Gynecol Oncol.* 2000 May;77(2):298-304
2. Komiyama, S., Aoki, D., Tominaga, E., & Susumu, N. (1999). Prognosis of Japanese Patients with Ovarian Clear Cell Carcinoma Associated with Pelvic Endometriosis: Clinicopathologic Evaluation. *Gynecol Oncol.* 1999 Mar;72(3):342-6

## Leiomyosarcoma and stromal cell tumours of the uterine body, incidence and diagnosis

Stuart Salfinger

*Abstract not available at time of publication. Please check the conference app for updates.*

## Session 9 / 1400 – 1530

Promenade 1

FREE COMMUNICATIONS C

## Laparoscopic bowel resection for deep infiltrating endometriosis: The CARE experience

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1. Centre for Advanced Reproductive Endosurgery, St Leonards, NSW, Australia

### Introduction

The aim of laparoscopic surgery in the treatment of endometriosis is to remove or destroy all visible endometriosis as well as to restore normal pelvic anatomy hoping to minimise pain and overcome subfertility. Clinical presentations of endometriosis are divided into three categories including peritoneal, ovarian, and deep infiltrating endometriosis (DIE). Due to its deep penetration to more than 5 mm beneath peritoneal surface, DIE can invade into vital organs such as bowel, bladder or ureters. As a result, it is considered the most difficult endometriosis to be removed.

### Methods

To evaluate clinical manifestations and surgical outcomes of women undergoing laparoscopic bowel resection for DIE at Centre for Advanced Reproductive Endosurgery during January 2010 and December 2014 using retrospective chart review.

### Results

Mean age was 35.5 ± 4.8 years and mean BMI was 23.1 ± 5.0 kg/m<sup>2</sup>. Among 30 women, 70% were nulliparous, 43.3% had infertility problem, 16.7% had at least two unsuccessful IVF cycles, and 60% had previous history of operative laparoscopic for endometriosis. The





most common presenting symptoms included dysmenorrhea (86.7%), dyschezia (80%), bowel motion fluctuation (76.7%), and dyspareunia (73.3%) respectively. With logistic regression, symptoms of dysmenorrhea (OR 4.2; 95% CI 1.58–11.14;  $p = 0.004$ ) and dyspareunia (OR 4.5; 95% CI 1.52–13.30;  $p = 0.007$ ) were strongly correlated with the clinical finding of rectovaginal nodule. Reports of DIE from imaging studies were significant predictors of rectal endometriosis. For surgical outcomes, segmental resection with re-anastomosis was carried out in 90% of patients, among which 73.3% were performed with ultra-low rectal resection. Median resected bowel length was 67.5 +94.5 mm. Distribution of endometriosis was demonstrated in rectum 96.7%, sigmoid 23.3%, appendix 10%, cecum 6.7%, and ileum 6.7%. Extent of endometriosis invasion on the bowel wall included 76.7% muscularis, 20% submucosa, and 3.3% mucosa. Median blood loss was 672 + 196 ml and median operative time was 180 + 40 minutes. There was only one case of leakage and one case of bleeding from anastomosis sites. Postoperative bowel dysfunction, including constipation and diarrhea, was as high as 90% while voiding difficulty occurred in only 30%. At 6 week follow-up, 90% of patients showed improvement in pain symptoms and 80% had better bowel function.

#### Conclusion

Laparoscopic bowel resection is an effective surgical procedure for DIE. Postoperative symptom relief has been confirmed. However, it requires multidisciplinary approach. Long-term follow-up is mandatory for actual estimation of pregnancy and recurrence rates.

1. Cornillie FJ, Oosterlynck D, Lauweryns JM, Koninckx PR (1990) Deeply infiltrating pelvic endometriosis: histology and clinical significance. *Fertil Steril* 53: 978-983.
2. Donnez J, Nisolle M, Grandjean P, Gillerot S, Clerckx F. The place of GnRH agonists in the treatment of endometriosis and fibroids by advanced endoscopic techniques. *Br J Obstet Gynaecol* 1992;99(Suppl 7):31-33.

### SWAPS and Da Vinci®: Entering the Age of Robotics

Amy Goh<sup>1</sup>, Victoria Qin<sup>2,3</sup>, Yogesh Nikam<sup>1,3</sup>

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2. Blacktown Hospital, Blacktown, NSW, Australia
3. Sydney West Advanced Pelvic Surgery Unit, Sydney, NSW, Australia

Robotic-assisted surgery (RAS) has been gaining popularity in gynaecology. Studies, however, have not shown significant differences in operative outcomes compared with laparoscopic techniques, apart from longer operative times(1-3). Regardless, the number of RAS procedures performed has been steadily increasing across the United States and Europe as both patients and clinicians have adopted it. In 2013, the Sydney West Advanced Pelvic Surgery (SWAPS) unit started learning RAS as a potential alternative technique of minimally invasive surgery. The initial uptake of RAS among patients and clinicians in the unit has been slow. Among the 20 cases performed, there were no immediate surgical complications or conversions. A brief retrospective comparison is made between the RAS hysterectomy versus total laparoscopic hysterectomies over a 14-month period. Discussions will be highlighting some of the challenges of adopting RAS in Australia, illustrating that prior experience in advanced laparoscopy has proven beneficial in the learning curve, and addressing the SWAPS experience from the point of view of current controversies about RAS.

1. Paraiso MF, Ridgeway B, Park AJ, Jelovsek JE, Barber MD, et al. A randomized trial comparing conventional and robotically assisted total laparoscopic hysterectomy. *Am J Obstet Gynecol*. 2013;208:368
2. Ng AT, Tam PC. Current status of robot-assisted surgery. *Hong Kong Med J*. 2014;20:241-50
3. Gocmen A, Sanlikan F, Ucar MG. Robot-assisted hysterectomy vs total laparoscopic hysterectomy: a comparison of short-term surgical outcomes. *Int J Med Robot*. 2012;8:453-7

### Fibroid Morcellation at Single Incision Surgery

Dr Tom Manley<sup>1</sup>, Dr Jim Tsaltas<sup>1</sup>, Dr Haider Najjar<sup>1</sup>

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Minimally invasive surgery for removal of fibroids has recently come under significant criticism. Morcellation of tissue specimens for removal is a critical step in minimal access surgery when performing myomectomy. The single site access platform not only allows complex surgery through reduced ports but also allows for morcellation and tissue extraction without the need for a powered device.

This video presentation displays the ease of tissue morcellation and extraction through a single access port system.



## 11 Year Audit of Outpatient Hysteroscopy Service at Mercy Hospital for Women, Melbourne.

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1. *Endosurgery Unit, Mercy Hospital for Women, Melbourne, VIC, Australia*
2. *Mercy Hospital for Women, Melbourne, VIC, Australia*

### Background

Ambulatory hysteroscopy is a safe, reliable and cost effective alternative to hysteroscopy under general anaesthetic. The endosurgery department at Mercy Hospital for Women has been providing an outpatient hysteroscopy service since 2000.

### Method

A prospective audit of patients has been kept since 2003. Review of the audit from March 2003 to January 2014 has been conducted.

### Results

During the audit time period, 990 outpatient hysteroscopies were performed. Indications for referral included 64% abnormal uterine bleeding in premenopausal women, 22% for post menopausal bleeding and 4% for incidental finding of increased endometrial thickness in post menopausal women.

94% (921) had successful access and view. Of these cases 11% had endometrial polyps visible and required a general anaesthetic procedure for polypectomy. 1.5% had an abnormal endometrial appearance to warrant re sampling under general anaesthetic.

The remaining patients had a pipelle sample taken of which 89% returned an adequate normal sample. Of the inadequate samples, those with normal outpatient hysteroscopic findings did not require further investigation if they remained asymptomatic.

This meant that approximately only 15% of patients undergoing outpatient hysteroscopy and pipelle required a subsequent GA hysteroscopy.

There were 50 vasovagal episodes (5%) though this rate decreased with changes in practice.

Overall patient satisfaction was high with 97% of patients reporting the experience as acceptable.

### Conclusion

Outpatient hysteroscopy is a safe and acceptable alternative to general anaesthetic hysteroscopy resulting in significant savings in hospital resources.

## Trans vaginal endoscopy (a.k.a Fertiloscopy): an Australian perspective.

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1. *Graduate School of Medicine, University of Wollongong, Wollongong, NSW, Australia*
2. *Sydney Women's Endo Surgery Centre, St George Hospital, Kogarah, NSW, Australia*

Trans vaginal endoscopy is a simple way to explore the pelvis. A member of the NOTES family (natural orifice trans luminal endoscopic surgery), it naturally belongs to the gynaecologist. For historical reasons, TVE seems restricted to certain countries (Belgium, France, Singapore, Indonesia, etc...) and has not really been embraced in Australia. Pioneering works in Victoria and South Australia in the early 2000's have not been followed through.

The technique is a development of a forgotten surgical procedure used in the 1960s called culdoscopy. In the 90's, Belgian authors (1) reported on the development of a standardised procedure of "transvaginal hydro laparoscopy". From that point on, there have been many studies into the transvaginal technique.

WatreLOT developed a disposable instrument that makes a more comprehensive procedure possible. He included in the device a conventional hysteroscope, so that the total procedure includes not only the TVE, but also hysteroscopy, and tubal patency check. The technique has also been reported as fertiloscopy. The tip of the introducer is in plastic and is a bit smoother than the usual needle, reducing the risk of bowel trauma. Studies comparing the results obtained with laparoscopy and dye test, and fertiloscopy have shown a high degree of concordance between both routes in the identification of adhesions and endometriosis. (2)

The benefit of the fertiloscopy is the minimal access (no scar, reduced pain, no risk of vascular injury with the introduction, possibility of performing the procedure under local anesthesia and mild sedation as an outpatient case, faster recovery).

The disadvantages are the impossibility to treat complex cases of adhesiolysis and excision of endometriosis in the same time. Most series report a 5 to 20 % rate of conversion to laparoscopy, if the procedure is judged unsafe or impossible (typically in case of fixed retroverted uterus). Complications include: sepsis, bowel or rectal perforation (less than 1%, and treated conservatively with antibiotics in most cases, as sub peritoneal).



The recent development in bipolar energies (Versapoint generator and disposable electrodes) makes ovarian drilling possible via the fertiloscope. (3)

This presentation will demonstrate the technique (introduction of the trocar, exploration of the pelvis, dye test). We will report about 5 consecutive cases of fertiloscopies performed in Wollongong, including (to the best of our knowledge) the first ever TV ovarian drilling performed in Australia. This is a modest but significant breakthrough in the field of minimally invasive gynaecology in Australia.

## Avoiding intra operative unexpected Leiomyosarcoma: Does age, menopausal status or clinical presentation assist risk stratification?

**Shamitha Kathurursinghe<sup>1</sup>**, Fiona Conell<sup>1</sup>, Orla McNally<sup>2</sup>, Catarina W Ang<sup>1</sup>, Deborah Neesham<sup>2</sup>

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2. *Oncology & Dysplasia, Royal Women's Hospital, Parkville, Victoria, Australia*

In gynaecological text books leiomyosarcoma is referred to as a rare form of malignancy encountered in the reproductive system. Traditional risk factors for the development of leiomyosarcoma include age greater than 60, post menopausal status, African/American background, irradiation and childhood retinoblastoma. Furthermore, clinical presentation of a rapidly increasing fibroid is also thought to be associated with leiomyosarcoma.

With the advances of laparoscopic surgical techniques, large benign fibroids are managed laparoscopically with the use of electromechanical morcellator. However the recent Food and Drug Administration (FDA) statement has put this device and leiomyosarcoma, a once rare malignancy into the spot light. Therefore we retrospectively evaluate our patient cohort to better understand the patient demographics, clinical presentation and disease progress in leiomyosarcoma to guide and inform future surgical decision making.

### Methods

All patient's with primary uterine leiomyosarcoma from Royal Women's hospital histopathology and gynaecology databases from December 1996 to December 2013 were included. Medical and electronic records were accessed to collect relevant data.

### Results

A total of 42 patients matched the audit inclusion criteria. The average age of diagnosis was 52 years with an alarming 20 patients diagnosed before the age of 50. Around 60% of the patients diagnosed with primary leiomyosarcoma were pre menopausal. There was also a wide variety of clinical presentations that resulted in unexpected finding of leiomyosarcoma on final histopathology. A total of 40 patients had surgical management for leiomyosarcoma. This resulted in 23 patients being diagnosed as stage 1 whilst 10 were classified as stage 3 and above at the time of primary diagnosis. Adjuvant therapy was utilised in 29 patients. The most common surgical finding in these patients was the finding of a large fibroid 10 cm in size or greater.

### Conclusion

Based on the above observations, demographics such as younger age and pre menopausal status may not predict the low risk patient. A wide variety of clinical presentations were also observed in leiomyosarcoma. The presence of a large fibroid was a common surgical finding, however given majority of myomectomies are performed for symptomatic large fibroids this finding does not differentiate benign from malignant disease.

## The first Single Site Robotic Assisted Laparoscopic Sacro-colpopexy in Australia

### Felix Chan

The first case of Single Site Robotic Assisted Laparoscopic Sacro- colpopexy performed in Australia is described. A 73yo lady with vaginal vault prolapse presented for assessment and treatment. She denied any bladder or bowel disturbances. Through a 2.3cm umbilical incision, a gel port was inserted. Standard bipolar forceps and monopolar diathermy were used for coagulation and dissection respectively. Synthetic monofilament mesh was sutured to the anterior and posterior vaginal wall with continuous 2/0 barbed sutures. After identification of landmark of sacral promontory, 2/0 Gortex sutures were used to suture the mesh onto the anterior longitudinal ligament. The pelvic peritoneum was closed to avoid exposure of the mesh to the pelvic viscera. The console time was 75minutes and the patient was discharged in 22 hours. She returned to normal activity in less than a week. On four weeks and six months postoperative followup visit, there were no surgical complications and there were no bladder or bowel disturbances. She remains sexually active and enjoyed an excellent quality of life.

Abdominal sacro-colpopexy has been described as golden standard for recurrent vaginal vault prolapse. Laparoscopic approach reduces hospital stay and analgesic requirement. Robotic assisted approach has shorter learning curve, higher reproducibility and with comparable result. Long term follow up studies are needed to define the role of robot surgery in vaginal vault prolapse.

## Establishment of an Endometriosis Support Group

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Endometriosis occurs in 10 percent of Australian women. These women may experience poor quality of life, menstrual dysfunction, ongoing pain and decreased fertility. Women describe psychological distress related to pain, body image, sexuality, relationships, health costs and employment issues. In response to requests from patients, a support group was established at Epworth Freemasons Hospital in 2011. The group meets bi-monthly, is open to all women in Victoria, in a supported environment with access to expert speakers. Participants share experiences with emphasis placed on the positive aspects of supporting each other and accessing resources to assist in coping strategies aimed at improving quality of life. Surveys are conducted yearly to assess efficacy in achieving our aims. Responses have been overwhelmingly positive, providing evidence that the establishment of an Endometriosis support group enhances the quality of life of these women. This presentation provides information about a valuable support group for all Victorian women. It is important that health professionals are educated about Endometriosis to enable early detection, treatment and support for women who experience this challenging disease.

1. *RANZCOG, Understanding Endometriosis 2. Dr Susan Evans et al., "6 Billion woman and the \$600 Million Girl" endorsed by Pain Australia and Faculty of Pain Medicine ANZCA, p. 12, 2011, kind permission of Dr Susan Evans 3. AGES Scientific Meeting, Brisbane, 2013*

## 3 Year Audit of a Multidisciplinary Approach to the Investigation and Management of Severe Endometriosis

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3. *Ultrasound Department, Mercy Hospital for Women, Melbourne, VIC, Australia*

4. *Colorectal Unit, Austin Health, Melbourne, VIC, Australia*

### Background

Preoperative diagnosis of the extent of severe endometriosis, particularly degree of bowel involvement, remains problematic with variable accuracy when based off symptoms, clinical examination, ultrasound and MRI in isolation. Resulting uncertainty can result in inefficient allocation of theatre resources- particularly operating time, primary operating gynaecologist and need for colorectal assistance.

### Practice

In an attempt to better triage patients with severe endometriosis undergoing surgical management, the Endosurgery Department at Mercy Hospital for Women has adopted a Multidisciplinary pre operative approach. On referral to the unit, patients have an endometriosis focused transvaginal ultrasound after a FLEET enema by a gynaecologist sonologist. If the ultrasound suggests stage IV endometriosis, patients proceed to a MRI.

A multidisciplinary meeting (MDM) is then conducted with gynaecologist, colorectal surgeon, radiologist and ultrasonologist present to come to a consensus on degree of bowel involvement and planned surgery (expected or possible need for bowel resection). Feedback at the meeting is also provided on patients who have since had operations completed to compare surgical findings to pre operative imaging.

### Method

A prospective audit of patients who have been reviewed at the multidisciplinary meeting and had their operations completed from Mar 2012 to Nov 2014.

### Results

38 patients were operated on during the study period. Bowel endometriosis of varying severity was diagnosed in 29 MRI and 30 US patients. At MDM, 19 of patients were deemed to have endometriosis involving rectal muscularis or deeper. 17 patients were expected to require some form of bowel resection and colorectal colleagues were expected to attend 22 operations. 15 bowel resections actually occurred. 13 of the resections were predicted with colorectal already in attendance.

### Conclusion

Multidisciplinary pre operative assessment of severe endometriosis can aid in the triage of patients to appropriately staffed operating lists. MDM also has the benefit of providing surgical feedback to our imaging colleagues.





## Laparoscopic Adenomyomectomy with Triple Flap Closure - Laparoscopic Modification of the Osada Technique

Joanne McKenna<sup>1</sup>, Reem Alanazy<sup>1</sup>, Louisa Konaris<sup>1</sup>, Lionel Reyftmann<sup>1</sup>, David Rosen<sup>1</sup>, Greg Cario<sup>1</sup>, Danny Chou<sup>1</sup>

1. *SWEC, Sydney, NSW, Australia*

This video demonstrates a uterine sparing excision of a 10.8cm x 9.7cm anterior wall adenomyoma with a strengthening triple flap closure of the myometrium. The patient was a 36year old P0+3, who had suffered one first trimester and two second trimester pregnancy losses. An 8cm longitudinal incision was made on the fundus-anterior surface of the uterus. The depth of the incision was carefully assessed by introducing a small flexible ruler into the peritoneal cavity. A 1cm margin of myometrium was left circumferentially around the excised adenomyoma, and at the internal margin of dissection next the endometrial cavity to preserve uterine function and minimise risk of breaching the endometrial cavity. The adenomyoma was then dissected out, within these margins and to the predetermined depth, en bloc, with a cold laparoscopic knife. The depth of excision was checked again after excision was complete. A hysteroscope was passed as an aid to dissection, to delineate depth of dissection; by periodically turning off the laparoscope light, to all the glow from the cavity to be seen. The uterine wall remaining was bisected on one side, to allow for a triple flap closure of the defect. Initial deep sutures were placed to obliterate dead space, before the two transverse flaps were opposed in an overlapping nature, in a transverse orientation. These two closed flaps were then covered by the remaining half of the uterine wall in a longitudinal plane. Surgical operating time was three hours twenty minutes. Estimated blood loss was 100ml. The theoretical, potential benefit of this approach to closure is the increased density of the myometrium overlying the uterine defect, and the spread of tension across multiple suture lines, possibly, increasing the uterine wall tensile strength during any subsequent pregnancy achieved.

## Review of Intracorporeal Uterine Tissue Extraction in Minimally Invasive Surgery: Video Presentation of In-Bag Morcellator

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3. *Sydney West Area Pelvic Surgery Unit, Sydney*
4. *University of Western Sydney, Sydney*
5. *Sydney Women's Endosurgery Centre, Sydney*
6. *Gynaecology Department, Blacktown Hospital, Sydney*
7. *University of New South Wales, Sydney*
8. *St George Hospital, Sydney*

### Objective

To review the current evidence, controversies and implications for future practice pertaining to contained intracorporeal morcellation during minimally invasive benign gynaecological surgery.

### Background

Electromechanical morcellation (EMM) has been around for two decades and has enabled surgeons to offer patients a minimally invasive approach to hysterectomy and myomectomy. 1 Minimally invasive surgery (MIS) has been well established to be associated with quicker recovery, less postoperative pain, less blood loss and overall less morbidity and mortality.

Recently the U.S. Food and Drug Administration (FDA) released a statement discouraging the use of EMM for women with uterine myoma citing safety concerns and recommended that morcellation be contraindicated in cases where the patient is peri/post-menopausal and for cases where they are candidates for en bloc removal of tissue.<sup>2</sup> The FDA also suggested that 1 in 350 women undergoing surgery for fibroids is found to have an unsuspected uterine sarcoma and that this perceived risk is more common than previously assumed.<sup>2</sup>

Recent events have put the use of EMM under scrutiny especially highlighting important drawbacks associated with open EMM including risk of trauma to surrounding structures, tissue disruption and dispersion within the abdominal cavity and more importantly the potential for the dissemination of occult malignancy. In addition such dissemination of occult malignancy can potentially upstage the disease, necessitate further surgical interventions and may be associated with worse prognosis. EMM should be reserved for cases where preoperative assessment is suggestive of benign pathology after careful counselling as recommended by governing bodies.<sup>1</sup> This proves to be challenging as the ability to preoperatively diagnose and screen certain types of uterine malignancy such as uterine sarcoma is limited.

Given the recommendation of caution with the use of EMM, the availability and the use of EMM has been variable across different health care institutions thereby limiting the extent of MIS that can be offered to patients with uterine fibroids.

Moving forward we must advance in two main aspects. Firstly improving preoperative detection and screening of uterine malignancy especially uterine sarcoma. Secondly, surgical innovation targeting different ways to morcellate uterine tissue in appropriate cases with ongoing safety evaluation.<sup>1</sup>

We will review the current evidence, controversies and recommendations surrounding the risks of EMM. We will review the potential alternative contained ways to morcellate tissue as described in the literature and a related video presentation.

1. AAGL: *Morcellation during Uterine Tissue Extraction*. 2014. [Available on [http://www.aagl.org/wp-content/uploads/2014/05/Tissue\\_Extraction\\_TFR.pdf](http://www.aagl.org/wp-content/uploads/2014/05/Tissue_Extraction_TFR.pdf)]
2. U.S Food and Drug Administration. *UPDATED laparoscopic uterine power morcellation in hysterectomy and myomectomy*. FDA Safety Communication. Nov 2014. [Available on <http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm424443.htm>]

## Tips and Tricks: Step-By-Step Laparoscopic Multiport Contained Morcellation After Myomectomy

Hasan Dr Titiz

Risks of electromechanical morcellation are spreading undiagnosed cancer, diffuse leiomyomatosis, and visceral injury (1). Food and Drug Administration (FDA) safety communication discouraged use of power morcellators for leiomyoma extraction after the case of disseminated leiomyosarcoma following a laparoscopic hysterectomy (2). Since FDA warning, laparoscopic contained (in bag) morcellation became very popular. But this can be challenging.

This video explains and demonstrates:

1. Laparoscopic port placement,
2. Step by step laparoscopic multiport contained morcellation after myomectomy (including what type of bag for what size of fibroid, how to insert 5mm trocar into the bag, how to use the morcellator, positions of surgeon and assistant during the morcellation),
3. Tips and tricks on each step of contained morcellation
4. Very important tips during the morcellation
5. Video demonstrations of these steps.

It seems to be laparoscopic contained morcellation is going to be standard practice and evolve in the future. But it is important to be aware of challenges and the risks of this relatively new technique.

1. Einarsson JI et al, *In-bag morcellation*, *J Minim Invasive Gynecol* (2014) 21, 951-953
2. Senapati S et al, *Power morcellators: a review of current practice and assessment of risk*, *Am J ObstetGynecol*, 2015; Jan 212 (1): 18-23

## Uterine artery ligation – to clip or let it slip?

Luke McLindon, Tal Jacobson, Michael Wynn-Williams

Haemostasis during laparoscopic surgery is of paramount importance. This is particularly pertinent for hysterectomy or myomectomy in the setting of the large fibroid uterus or in the setting of frozen pelvis/severe endometriosis. Ligation of the uterine artery by temporary (Atrium vascular clip) or permanent (Hem-O-Lok polymer clip) means facilitates a surgical field conducive to meticulous technique. This video presentation will illustrate the surgical anatomy, the importance of adequate uterine artery exposure and clear identification of the ureter prior to placement of the vascular clip. Both permanent and temporary methods of uterine artery ligation, and some challenging situations will be demonstrated.

## Surgical pearl of colpotomy and specimen removal for laparoscopic myomectomy.

Tomonori Hada, Masaaki Andou

Laparoscopic myomectomy consists of three major steps, enucleation, reapproximation, and retrieval of the specimen. There are some difficulties in each of these three steps when performed laparoscopically.

Today I present colpotomy technique for extraction.

We don't use an electric morcellator and the vagina is used as the retrieval route. The posterior fornix is opened laproscopically using a specially developed vaginal pipe (Vagi-pipe). As the huge tumour did not descend into the deep pelvis due to obstruction, the specimen is divided into some pieces using a usual scalpel introduced via a trocar site. Cutting image is important. There are 2 patterns of how to cut the huge fibroids. Scalpel can only cut straight, so we have to move the fibroid and cut it effectively.

Then anchor suture is placed in each of the pieces and then fed into the vagina in preparation for extraction. Each specimen is further cored and then finally retrieved through the vagina by pulling each of the sutures.



Precise manoeuvring of instrument and improvement of suturing skills will shorten the surgical time.

## **Surgical tips and tricks in laparoscopic hysterectomy for the treatment of acute urinary retention caused by impacted cervical fibroid**

**Pattaya Hengrasmee<sup>1</sup>**, Tahani Almotrafi<sup>1</sup>, Alan Lam<sup>1</sup>

1. *Centre for Advanced Reproductive Endosurgery, St Leonards, NSW, Australia*

### Background

Acute urine retention can result from impacted pelvic masses such as large uterine myoma

### Case summary

A 49 year-old lady presented to A/E department in acute urinary retention. Examination and imaging studies demonstrated bladder neck obstruction caused by a large prolapsed cervical fibroid wedged in the pelvic cavity.

### Intervention

The DVD demonstrates the essential steps taken to allow the tips and tricks in the dissection of the pelvic sidewall, ureters, bladder and uterine vessels allowing total hysterectomy and removal of the impacted fibroid uterus. The patient made a complete recovery with resumption of normal voiding.

### Conclusion

Laparoscopic hysterectomy following a systematic approach to pelvic sidewall dissection allows safe and minimally invasive surgical removal of the impacted cervical fibroid.

## **'A stitch in time . . . ' isn't always enough. A case of repeated laparoscopic cervical cerclages in a grand multip**

**Joanne B McKenna<sup>1</sup>**, Reem Alanazy<sup>1</sup>, Louisa Konaris<sup>1</sup>, Lionel Reyftmann<sup>1</sup>, David Rosen<sup>1</sup>, Greg Cario<sup>1</sup>, Danny Chou<sup>1</sup>

1. *SWEC, Sydney, NSW, Australia*

We would like to present a case of a 37 year old grand multiparous woman, in whom we placed her sixth cervical cerclage, laparoscopically. This was her third laparoscopic cerclage in a complicated history of pregnancy loss and repeated interval and rescue suture placements, we look at the missing piece of the jigsaw in relation to cervical incompetence. Undoubtedly part of a syndrome complex this condition continues to baffle, why would a high, tight suture not secure a pregnancy? In addition to the case history and video footage of the revision laparoscopic cerclage, we will discuss the current immunological evidence on cervical incompetence, to endeavour to shed light on the reasons why a secure, well positioned suture is sometimes, not enough.

## **Single Incision Hysterectomy - The Critical Steps**

**Dr Tom Manley<sup>1</sup>**, Dr Jim Tsaltas<sup>1</sup>, Dr Haider Najjar<sup>1</sup>

1. *Gynaecology Endoscopy Unit, Monash Health, Melbourne, Victoria, Australia*

Minimally invasive surgery has significant benefits for patient's post-operative recovery and reduced port surgery is and should be a goal for all operative gynaecologists today and into the future. Single site surgery is not in the scope of general laparoscopic training in gynaecology and therefore few operative gynaecologists have the opportunity to master this technique. With the help of newer single site entry devices this surgery becomes more ergonomic making multiport operative gynaecological procedures now in the realm of the single site surgeon.

Presented here are the critical steps to complete a total laparoscopic hysterectomy safely through a single port.

## **Review of Opportunistic Bilateral Salpingectomy during Gynaecological Surgery for Benign Disease: The evidence, controversies and future challenges**

**Supuni Kapurubandara<sup>3,1,2</sup>**, Apputhurai Anpalagan<sup>3,1</sup>, Alison Brand<sup>1,4</sup>

1. *Western Clinical School, Sydney University, Sydney, NSW, Australia*

2. *SWAPS, Sydney West Area Pelvic Surgery Unit, Sydney, Australia*

3. *O&G, Westmead Hospital, Westmead, NSW, Australia*

4. *Gyneoncology Department, Westmead Hospital, Westmead, NSW, Australia*

### Objective

To review the current evidence and controversies pertaining to opportunistic bilateral salpingectomy (OBS) and propose a guideline for clinical practice.



## Background

Emerging epidemiological evidence highlight the fallopian tube to be the site of origin of pelvic serous cancers (PSC) including serous epithelial ovarian cancers.<sup>[1,2]</sup> This type of ovarian cancers have the highest mortality and represent the most common subtype with no effective screening test.<sup>2</sup>

Recognition of the malignant potential of the fallopian tubes has led to a shift in surgical practice, particularly in Canada and the United States of America, with increasing consideration of OBS at the time of hysterectomy for benign conditions and as an alternative for surgical sterilisation in the general population.<sup>3</sup> Randomized controlled trials are needed to support the validity of this approach to reduce the incidence of ovarian cancer in a low risk population.

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG), Society of Gynecologic Oncology of Canada (GOC) and American College of Obstetricians and Gynecologists (ACOG) all support an individualized approach to counselling patients where the potential risks and benefits of OBS should be discussed.

A recent Australian survey revealed the sporadic adoption of OBS amongst RANZCOG fellows especially during abdominal and laparoscopic hysterectomies. An accepted standard of histological assessment of the fallopian tube specimen should be implemented in order to not miss any malignant or premalignant lesions. The clinical relevance of these lesions is unknown because of the uncertainty regarding managing such findings in an otherwise asymptomatic individual with no genetic risk factors.

While it is now clearer that OBS is being adopted both locally and internationally, the actual rates of uptake of OBS and, more importantly, its surgical and clinical outcomes within the Australian population is still uncertain. Currently, there is no separate Medicare item number for bilateral salpingectomy to enable easy identification of women choosing to undergo this additional procedure, as exists in other countries.<sup>3</sup> Data regarding the number of women undergoing this procedure, linked with short and long term outcomes as could be provided in a national registry, would be beneficial in determining the true benefit, as well as any potential harms, of this procedure.

1. McCluggage WG. Morphological subtypes of Ovarian Carcinoma : a review with emphasis on new developments and pathogenesis. *Pathology* 2011;43:420-32.
2. Tone AA, Salvador S, Finlayson SJ, et al. The role of the fallopian tube in ovarian cancer. *Clin Adv Hematol Oncol* 2012;10:296-306.
3. McAlpine JN, Hanley GE, Woo MM, Tone AA, Rozenberg N, Swenerton KD, et al. Opportunistic salpingectomy: uptake, risks, and complications of a regional initiative for ovarian cancer prevention. *Ovarian Cancer Research Program of British Columbia. Am J Obstet Gynecol* 2014;210:471.e1-e11

## Session 10 / 1600 – 1730

Promenade 1

HYSTERECTOMY

### Laparoscopic hysterectomy, what's the point of evidence?

Anusch Kazdani

*Abstract not available at time of publication. Please check the conference app for updates.*

### Uterine debulking following TLH, the pelvic surgeon at work

Prashant Mangeshkar

*Abstract not available at time of publication. Please check the conference app for updates.*

### The Best Hysterectomy For Your Patient – Evidence and Cost-Based

Bashkar Goolab

Objective

There are many routes to hysterectomy. Despite the obvious higher morbidity, longer hospital stay and a longer recovery; abdominal hysterectomy is the route of choice of hysterectomy world-wide. TLH is gaining popularity but has a significantly high complication rate e.g. bladder, ureter and bowel injuries. It still remains the most expensive route for hysterectomy. VH still remains a feasible option which is cost-effective, with minimal complications. To evaluate the feasibility and complication rate of VH in women with enlarged uteri.





## Design

1400 women underwent VH for benign pathology. Normal contra-indications of vaginal route: moderate-excessive uterine enlargement, nulliparity, previous caesarean section, minimal utero-vaginal descent were challenged.

## Setting

VH is the bedrock skill, and signature operation of the Gynaecological Profession- Robert Kovac: Advances in Reconstructive Vaginal Surgery. THE OUTCOME OF ANY SURGERY IS DIRECTLY ASSOCIATED WITH THE SURGEON'S SKILLS.

## Patients

Mean age = 41.5 yrs

Mean parity = 3.2

Nulliparity = 68 (5%)

Multiparity = 1332 (95%)

Previous abdominal surgery = 240 (16.5%)

Minimal uterine descent = 1308 (90%)

Previous caesarean section: 208 (14.8%)

Caesarean section x1 = 122(60.2%)

Caesarean section x2 = 54 (25%)

Caesarean section x3 = 32 (14.8%)

## Interventions

Measurements & Main Results: Total cases = 1400

Abdominal Hysterectomy = 250

Conversion to TAH = 33 (2.4%)

Successful vaginal hysterectomy = 1117 (79.8%)

Duration of stay in hospital (mean) = 2.8 days

Mean weight of uterus = 120 gm

Ave. weight of patient = 77 kg

## Complications

Pelvic infection - 16 cases (1.3%); Retro peritoneal haematoma - 11 cases (1.0%); Vault haematoma - 6 cases (0.5%); Ureteric injury - 0 cases (0%); Bladder injury - 8 cases (0.8%); Complications related to: Laparoscopy - 0 cases (0%); Vault abscess - 6 cases (0.5%); Sub-acute bowel obstruction - 1 cases (0.1%)

## Laparoscopic hysterectomy, what is the limit?

**Danny Chou**

*Abstract not available at time of publication. Please check the conference app for updates.*

## The impact of Mirena and ablation on global hysterectomy trends, current and future challenges

**Ellis Downes**

Hysterectomy is the most common main surgical procedure performed in women, generally for menorrhagia. There are significant international and regional variations in the hysterectomy rate and the route at which hysterectomy is performed reflects patient preference, additional national surgical practice and the ease of access to specialist healthcare. The recent introduction of National guidelines changed practice has reduced the variation in hysterectomy rates to some degree.

With the introduction of Mirena and Endometrial Ablation becoming more widespread, coupled with a growing desire by women to avoid major surgery, the incidence of hysterectomy worldwide is reducing.

This presentation will examine in more detail global hysterectomy trends against increased ablation and Mirena in practice and will speculate on how this will continue to improve the care for women in future years. It will also identify vital research questions that need to be addressed to allow us to continue to offer our patients the best available treatment options.



## Managing intraoperative bleeding at laparoscopy

Emma Readman

Intraoperative bleeding during laparoscopic surgery can occur any time from entry to the end of the case, and in some cases may be the end of the case. It can be catastrophic or simply part of the routine management of any laparoscopic case. This presentation seeks to examine some of the statistics around the occurrence of intraoperative bleeding, and run through the management of it.

## Suturing at complications, techniques, needles and suture materials

Bruno van Herendael, Alfonso Rossetti, Ornella Sizzi

In surgery the skill of suturing is an essential part of the training to become an all-round surgeon.

When a surgeon separates tissues the tissues have to be reconnected during and at the end of the surgery. Gynecological surgery is no exception to this rule. What does a gynecological surgeon need suturing for you will find in. The indications to use suturing in conventional gynecological endoscopic surgery are:

- To reconstruct anatomical & functional sites at surgery.
  - The Uterus after Myomectomy.
  - The Vagina after Hysterectomy.
  - The Bladder after Endometriosis surgery or trauma.
  - The Ureter after section.
  - The Rectum after Endometriosis surgery or Trauma.
  - The Ovary after Cystectomy.
- To Secure Bleeding.
- To suspend structures at surgery (Pelvic Floor Surgery and out of the operation field).
- To reconstruct structures.

In emergency situations the sutures to use are braided sutures mainly because a limited amount of bipolar cautery can be used over braided sutures (0-1) without the suture losing its tensile strength. Monofilament sutures disappear under bipolar coagulation over the suture. In normal situations monofilament sutures are preferred when dealing with delicate structures i.e. bowel and bladder. As for needles in emergency situation cutting or reverse cutting needles are the needles of choice. In normal circumstances rounded needles are the choice to suture bowel and bladder. Halve circle needles are preferred in emergency suturing. In normal circumstances straight needles have their place to suspend structures. In emergency situations rather big needles are preferred with a suture 0 or 1.

## Management of bowel injury during laparoscopic surgery

Martin Healey

Injury of the gastro-intestinal tract is an uncommon complication at laparoscopy (\*\*x/1,000). Categorisation of such injuries include: (1) anatomical site (eg stomach, ileum, sigmoid...) (2) depth (eg serosal, muscularis, full thickness) (3) timing (eg at entry vs post-entry) (4) mechanism (eg trocar, scissors, coagulation diathermy...).

The most important management process is prevention. Once an injury has occurred the most important process is to recognise the injury at the time and initiate appropriate repair all in the one operation.

The method of injury repair is influenced by the availability of surgical colleagues (colorectal or general), the skills of the primary operator, the available instruments, and the current regional range of accepted practice.

A number of case reports will be presented as illustration.

## The Role of the Interventional Radiologist in Obstetrics and Gynaecology

John Vrazas

Image guided procedures have played an important and helpful adjunct in the diagnostic evaluation and treatment of the gynaecological patient. Since the 1970's, a number of vascular and non-vascular procedures have been developed and refined to provide solutions to some of the most difficult problems facing the gynaecological patient and their doctor.



Some of the most important areas where interventional radiology can play a crucial role will be discussed.

One of the most distressing problems for both patient and surgeon is bleeding. The interventionalist can assist in the control of bleeding, such as menorrhagia due to fibroids and adenomyosis, post-partum haemorrhage and placenta accreta and post-operative haemorrhage. Controversies surrounding uterine fibroid embolisation and surgery will be reviewed.

Uterine fibroid embolisation (UFE) has shown considerable success in the control of bulk and pressure symptoms in patients with fibroids. Reversal of symptoms such as urinary frequency, constipation and abdomino-pelvic bloating have given UFE a very high rating in Quality of Life improvement Surveys. Patients have demonstrated a high degree of satisfaction with the outcome of UFE in management of menorrhagia and bulk symptoms.

Chronic pelvic pain presents one of the most difficult problems in medical practice. Its' diagnosis is complex and convoluted, requiring multiple tests and invasive procedures. One entity which has eluded us for many years is Pelvic Congestion Syndrome, and management by ovarian and pelvic variceal embolisation and sclerotherapy can provide a most welcome solution. Given the chronicity of this condition and its elusive diagnosis, most of the patient also have a chronic pain syndrome that needs attention in parallel to pelvic congestion. This condition is often accompanied by varicose veins of the perineum, vulva and the lower limb. Some rarer causes of pelvic pain, such as the entrapped ovary will be presented.

Hysterosalpingography and fallopian tube recanalization have historically been a first line entity in the management of the infertile patient. The unique benefits of the "endoluminal" approach of these procedures provides an evaluation and treatment option not achievable by other modalities.

## Update on the haemostatic agents

**Pattaya Hengrasmee**

'Haemostasis' is derived from two Greek terms 'haima' and 'stasis'. It is defined according to the Medical Dictionary as the stoppage of bleeding. The mechanism of haemostasis requires three important steps including:

Vascular spasm

The first response of the blood vessels to injury which helps reduce the amount of blood flow to the damaged area

Platelet plug formation - Platelets in circulation become adhered to the damaged endothelium and form a temporary seal to cover the break in the vessel wall called 'platelet plug'.

Blood coagulation - Through coagulation cascade, fibrinogen is converted to fibrin. Fibrin threads act as a molecular glue that reinforce the platelet plug.

Intraoperative bleeding is one of the common complications during gynaecologic surgery. The inability to control bleeding can result in a life-threatening situation. Several methods can be used to achieve haemostasis. Primary approaches include direct pressure, ligature, suturing, hemoclips, and electro-cauterisation. However, in circumstances when conventional surgical techniques are not feasible such as bleeding near vital structures, at needle-holes, from raw surface areas, in friable tissue, or in patients who have abnormal coagulation, topical haemostatic agents may serve as adjunctive treatments.

Characteristics for an ideal haemostatic agent comprise high efficacy, non-antigenicity, complete absorbability, quick preparation, easy application, and inexpensiveness. Unfortunately, this agent does not exist. Topical haemostatic products currently available vary in composition, mechanism of action, method of use, and specific advantages and adverse reactions. They are broadly divided into three categories including physical, biologic, and synthetic agents.

Physical agents

Mechanism of action - promote haemostasis by providing physical matrix for clotting initiation

Examples:

- Gelatin (Gelfoam)
- Oxidized regenerated cellulose (Surgicel)
- Microfibrillar collagen (Avitene)

Biologic agents

Mechanism of action - stimulate the coagulation cascade through transformation of fibrinogen to fibrin by thrombin's enzymatic action



Examples:

- Topical thrombin(FloSeal)
- Fibrin Sealants (Tisseel)
- Platelet Gel (Vitagel)

Synthetic agents

Examples:

- Cyanoacrylates (Dermabond)
- Polyethylene Glycol Hydrogel (CoSeal)
- Glutaraldehyde Cross-Linked Albumin (BioGlue)

Possible adverse reactions of topical haemostatic agents are as follows:

- Risk of thrombosis if injected into circulatory system
- Risk of transmitting infectious disease due to human plasma component
- Hypersensitivity reactions to biologically active substances

In summary, topical haemostatic agents are intended to be adjuncts, not substitutes, for meticulous surgical technique and conventional methods to control haemorrhage. As a result, careful consideration of their risks and benefits are crucial before utilising individual agent.

## Management of major laparoscopic complications

**Masaaki Andou**

Objectives

To show a number of injury management techniques for the bowel, urinary tract and vessels.

Materials and Methods

During laparoscopic surgery there is always the chance of intraoperative organ injuries. Prevention is the best strategy, but once injuries occur, finding and repairing them in the same operative session is vital to maintain the original minimally invasive target of the surgery.

The important issues are; very careful observation and understanding the high risk actions which most commonly lead to intraoperative injuries, and recognition of the organ injury. Unfound injuries can cause serious postoperative complications. Same operative session repair reduces difficulty and patient trauma.

Finding urinary tract injuries involves observing the suspect area and, possibly using IV dye to elucidate the leaking point. To find injuries along the small and large bowel, checking the course of the possible injury site is necessary. Injuries to the rectum can be checked by digital examination and air or dye leak tests. To find the bleeding point with vascular injuries it is important to temporarily control bleeding, to clarify the injured site.

Repair techniques shown include urinary tract, bowel and vasculature injury repair. For urinary tract and vascular injuries we use intracorporeal suturing in one layer, everted to prevent stenosis and thrombosis. For the bowel, we use a suturing or stapling technique. The suturing is double layered and the wound is inverted to prevent leakage and infection.

Results

All patients were able to undergo repair in the same operative session and all injuries were repaired laparoscopically.

Conclusion

Each type of injury and organ has characteristic requirements and appropriate techniques for intact repair. Following basic tenets of tension-free, angulation-free approximation and removing all unsound tissue will result in good repair with good blood perfusion.





Saturday 7 March 2015

**Session 11 / 0800 – 1030**

Promenade 1

**ENDOMETRIOSIS**

### **Endometriosis and pain, does surgery have a role?**

**Alan Lam**

Pain is a prominent symptom of endometriosis with prevalence ranging from 30 to 90% amongst women undergoing laparoscopy for evaluation of chronic pelvic pain. Pain symptoms most commonly associated with endometriosis are dysmenorrhoea, dyspareunia and non-menstrual pelvic pain. These symptoms may exist in variable combination from person to person and may fluctuate in severity and from time to time.

As endometriotic lesions similar to those found in women presenting with pain have also been detected in asymptomatic women, the relationship and the mechanisms by which endometriosis causes pain are still not fully understood.

Evidence from randomised controlled trials demonstrates that laparoscopic surgery is effective in treating overall pain associated with endometriosis. In general, the aims of laparoscopic surgery of endometriosis are to remove (excise) or destroy (ablate) all visible endometriotic lesions, to divide adhesions, to restore normal anatomy and to repair damage to reproductive organs. Surgery can be used as first-line therapy or after failed medical therapy.

The available techniques for surgical treatment of endometriosis include sharp dissection, electro-surgery, Argon Neutral Plasma Energy, laser or harmonic energy. While limited evidence does not allow conclusion to be made regarding which surgical technique is most effective, it is generally recommended that deep endometriotic lesions should be excised, particularly when dealing with pain recurrence in women having undergone previous endometrial ablation.

While effective, pain recurrence is not uncommon following laparoscopic destruction of endometriosis, with reported incidence ranging from 30 to 60% of patients. The addition of laparoscopic uterosacral nerve ablation has not been shown to improve pain relief. Presacral neurectomy, on the other hand, has been shown to benefit some women with chronic, intractable pelvic pain, the benefits may be outweighed by the potential harmful side-effects.

**Conclusions**

High-quality evidence exists demonstrating statistically significant benefit of laparoscopic surgery in the treatment of endometriosis-related pain. Pain recurrence, sadly, is not uncommon after surgical treatment. Much research is required to expand our knowledge of mechanisms of pain in endometriosis, thus increasing our understanding of the benefits and limitations of surgical treatment of this enigmatic condition.

### **Preoperative assessment of DIE**

**Luk Rombauts**

*Abstract not available at time of publication. Please check the conference app for updates.*

### **Blue Contrast Techniques for visualising subtle endometriosis, controversy or fact?**

**Tamer Seckin**

Endometriosis, a disease affecting approximately 10% of the female population, requires laparoscopy and histologic confirmation for diagnosis. Laparoscopic recognition of endometriosis lesions can be extremely challenging even for the experienced surgeon due to the protean appearances of endometriosis. Visual appearance of what is classically described as pigmented, dark lesions are easily spotted while the non-pigmented, more prevalent white lesions, also known as "subtle" lesions, pose difficulty for recognition. This is due to a wide unrestricted light spectrum, light reflection, and gas pressure used in laparoscopic surgery. Eliminating these optical illusions, Aqua Blue Contrast Technique (ABCT) is a novel revolutionary method that aids the surgeon's eye to recognize subtle peritoneal abnormalities. Distinct morphological features detected with Aqua Blue Contrast Technique is eventually confirmed as inflammation and endometriosis with pathological samples stained with Hematoxylin and eosin (HE) and by using immunohistochemical staining of CD-10, for which it is often positive for both, with stromal cells alone more commonly found than glands/stroma.



The ABCT® identifies normal peritoneum and its texture is easily identified. This method assists the surgeon to target the lesion by clear recognition of subtle peritoneal changes in endometriosis. Assisted by enhancing contrast and eliminating the yellow and red spectrums, the surgeon is now more easily able to perform tedious and precisely accurate excision surgery without unnecessary removal of normal peritoneum. Aqua Blue Contrast Technique® not only will improve results for excision surgery, but also opens a future window of understanding and likely will bring a new definition to our aged concepts about endometriosis.

## Controversies in the Aetiology of stage I and II Endometriosis

**Michael East**

An audit of 810 patients having undergone surgery to excise stage I and II endometriosis will be presented to examine the findings of the sub-group of patients that required repeat surgery. The site and amount of 'recurrence' will be discussed in relation to how the study observations tend to confirm or refute the dominant aetiological theory that retrograde menstruation is the main cause of endometriosis. The various other theories regarding aetiology of endometriosis will also be discussed along with evidence that supports each theory.

## The current management of Endometriomata

**Alberto Valero**

TOP TENS.

1. Symptoms (hyper polimenorrhea, dysparheunia, bowel and urine troubles, Infertility)
2. Palpable mass
3. Sonography Imagen
4. MRI definition
5. Hormonal inhibition
6. Endoscopic access
7. Capsule excision & Ovarian Reconstruction
8. Functional ovary (oocyte preservation)
9. Support
10. Follow up

Palpable Mass

Influence on infertility is multiple, direct mechanical influence, tubal stenosis or blockage, cyst formation in the ovary, blockage in the pouch of Douglas with bleeding, activation of macrophages, activation of cytokines and immune resistance.

Diagnosis

Laboratory. Tumoral markers Ca 125.

Ultrasound first approach and MRI Diagnosis: Evidences of masses between 1 a 5 cm of diameter. Diferenciated endometrial masses with peritoneal metastasis.

Medical management

Endocrine supression previous surgey 4 to 6 weeks, after surgery 4 to 6 months increase the fecundation rates, diminished pain and prevent restart endometriosis (GnRH analogous).

Surgical management

Endometriomata enucleation: Performance without spilling, Endobag extraction, Flushing of the wound, Coagulation of reminder tissue, Adaptation of wound, Edges with sutures ?

Ovariectomy Support

Neurovegetative support.

Psycoemotional swings.

Replacement therapy to avoid bone loss: Calcium, Calcitonine, Diphosfonats.

Add back with estradiol in lower dosis.

Follow up

Symptoms

Estradiol levels evaluation (pg/ml).

Endometrial biopsy.

Sonogram.

Bone density evaluation.

Lipid Profile (HDL- LDL).



Emotional disorders  
Long term Management with OC, progesterone.

Promenade 2&3  
HYSTEROSCOPY

### **Modern management of Asherman's Syndrome**

**Jim Tsaltas**

*Abstract not available at time of publication. Please check the conference app for updates.*

### **Hysteroscopic morcellation, evolution or revolution?**

**Rajendra Sankpal**

Hysteroscopy in Gynecology has revolutionary changes in the recent past. Introduction of the resectoscopy and operative sheath with mechanical instruments revolutionised the management of benign Gynecological pathologies. In this way the management of the benign pathologies became the day care affair reducing the morbidity. Further the introduction of office Hysteroscopy made the Hysteroscopic surgery from day care to an office procedure. This change is really beneficial to the patient. The progress of monopolar resectoscope to bipolar further reduced the complications associated with the Glycine as the distension medium, but the risk of perforation and electrical injury to bowel still remains the same, though the risk is very minimal in the hands of a refined Hysteroscopic surgeon. Hysteroscopic morcellator, a tubular, rotating, mechanical energy system was developed since more than 10 years. The development of such morcellators have occurred to curtail the likely complication of conventional resectoscopy especially fluid overload, perforation of uterus, bowel injury & haemorrhage. Technically the Hysteroscopic morcellator is a boon for resection of Grade 0 and Grade 1 submucous myoma. On the other hand resection of Grade II myoma and the deeper myomas at the fundal and cornual regions is technically not easy as compared to the Grade 0 myoma with the morcellators. On the basis of acknowledged limited information, the life-threatening complications such as fluid overload, uterine perforation and bleeding do occur with hysteroscopic morcellation but less frequently than with traditional electrocautery. Hysteroscopic morcellator is a good evolution in the management of submucous myoma. Further refinement in the equipment is needed to easily tackle the deeper submucous myomas. Furthermore cost is a limiting factor to use this technology exclusively for submucous myoma and polyps.

### **Office hysteroscopy**

**Stefano Bettocchi<sup>1</sup>**

*Abstract not available at time of publication. Please check the conference app for updates.*

### **Hysteroscopy in fertility enhancement**

**Lotte Clevin**

Hysteroscopy is a gentle but very efficient way to access the uterine cavity. Several different techniques and equipment are available. Fertility problems can be detected and treated by the hysteroscopic approach both by using minihysteroscopes and standard resectoscopes. Conditions and pathologies causing subfertility are many – uterine anomalies as a septate uterus is obvious for hysteroscopic treatment. Preoperative sonographic assessments are important for optimal decision of technique and equipment. Even hysteroscopic sterilization might have a place in treating hydrosalpinges before IVF.

### **A review on global endometrial ablation**

**Catarina Ang**

Techniques to reduce menstruation by endometrial ablation initially became possible with the advent of hysteroscopically guided ablations using laser and electrocautery by the late 90s. A variety of global second generation endometrial ablation devices began to be developed. These have simplified endometrial ablation, allow it to be undertaken in outpatient settings with reduced anaesthetic time. They have improved the ease with which abnormal uterine bleeding can be performed with a high success rate and high patient satisfaction. These made them an excellent option for the conservative management of menstrual disorders. However, there are still potential issues in long term management that needs to be addressed.



We will review the various devices available and with a reference to their ease of use, cost and success rate.

## The hysteroscopic approach to the management of congenital uterine anomalies

**Osama Shawki**

Uterine leiomyomas are the most common pelvic tumor in women (20% of all benign tumours in women) and risk of malignancy is less than 0.2 to 0.5 percent.

Women with fibroids may suffer abnormal uterine bleeding, in addition to risks in pregnancy. These include poor implantation sites and restriction of normal uterine enlargement, resulting in preterm labor and miscarriage.

A systematic literature review found that only those fibroids with a submucosal or an intracavitary component were associated with adverse reproductive outcomes and suggested hysteroscopic myomectomy may be of benefit.

In case of hysteroscopic myomectomy we will avoid laparotomy, uterine incision, and hospital stay.

Many different instruments are used for hysteroscopic myomectomy. They include the resectoscope, scissors, morcellator and laser.

Two-step procedures: the observation of the rapid migration of the residual intramural component of the fibroid towards the uterine cavity, with the parallel increase of myometrial thickness during hysteroscopic myomectomy is the basis of this treatment.

During the first step, the fibroid can be resected to the level of the endometrium or just below and the second step, performed 2 months later, can resect the remainder of the fibroid.

We begin resection by placing the loop just beyond the most cephalad portion of the fibroid and gradually draw the loop towards the operator by moving either the loop alone, through its spring mechanism, or by moving the entire resectoscope.

Hysteroscopic myomectomy is especially effective if the fibroid is less than 3 cm.

Notify that resection of a completely intramural fibroid has the risk of intravasation of media due to prolonged procedure time.

If the intramural component of the fibroid is greater than 50%, the patient is at risk for recurrent symptoms.

When we face small pieces of myoma accumulating in the field during resection, we may remove the inner sheath of the resectoscope, which allows drainage of the uterine cavity and will clear the field. Polyp forceps may be needed to remove larger debris. The tissue is collected for histologic examination.

Whether treatment with GnRH agonist before myomectomy offers any significant advantage is still a matter of debate.

Some gynecologists use vasopressin injected into the cervical stroma before the procedure in an attempt to decrease blood loss and operative time.

The surgical area will become covered with newly proliferated endometrium postoperatively. Estrogen therapy has not been effective in decreasing intrauterine adhesions.

It is not known whether hysteroscopic myomectomy affects placentation in subsequent pregnancies. In addition, there have been no case reports of uterine rupture after hysteroscopic myomectomy.

## Session 12 / 1100 – 1200

Promenade 1

TRAINEES AND BEYOND – ALL WELCOME

## Current status of the AGES Training Program

**Alan Lam**

In 2014, after years of planning and discussion, AGES formally introduced the Fellowship in the Australasian Gynaecological Endoscopy and Surgery Society (AGES) Training Program in Gynaecological Endoscopy.

The purpose of AGES Fellowship is to standardise the advanced endoscopic training that occurs in multiple facilities throughout Australasia, providing a framework for trainers, standardising training facilities and assuring the quality and competence of graduates.





The AGES Society accredited training program is undertaken over a two year period in an accredited training facility in line with the curriculum.

Trainees completing this program qualify for credentialing up to the highest level of endoscopic competence as defined by RANZCOG/AGES.

Fellowship training can only take place at an AGES accredited training unit under the direction of one training director. Each trainee must be under the supervision of at least two training supervisors over the period of their training.

Currently there are 16 AGES accredited training units, 14 in Australia and 2 in New Zealand.

Trainee applications for AGES accredited training programs open in February of each year, for program approval for the subsequent year. Applications are reviewed by the AGES Education Subcommittee.

Interviews for training positions are conducted at the time of the AGES Annual Scientific Meeting. The interview panel consists of the Chair of the AGES Education Subcommittee, appointed members of the AGES Executive, a trainee representative and representatives of the units providing AGES accredited training program positions in that year. Other members of the panel may be co-opted at the discretion of the Chair.

Directors of training of an accredited training program may recruit any applicant on an individual and discretionary basis. The AGES Society is not responsible for individual applicant placement, but merely facilitates placement and interview processes.

Ultimately, AGES's goal is to produce gynaecological endoscopists who can work across a broad range of fields involving minimally invasive techniques, support other specialists in their work, conduct teaching, training and research, and act in consultative and advisory roles to promote minimally invasive surgery and shape health policy.

## Surgical experience in the AGES accredited fellowship program

Jason Abbott, Stephen Lyons, Anusch Yazdani

This meeting marks a milestone event for AGES – the 'graduation' of our first cohort of trainees who have successfully completed training at an AGES approved training site. At the time of writing, 5 different sites in Sydney, Melbourne and New Zealand will have fellows receiving their AGES Fellowships.

Logbooks for this group of trainees report that they operated for a mean number of 5 sessions per week (range 4-8); attended a mean of 9 meeting over their 2 year period of training (range 5-10); presented a mean of 7 times (range 4-10); published 3 peer-reviewed scientific papers (range 1-4) with 2 as first author (range 0-4).

All trainees were found to be satisfactory in both their advanced procedures (including laparoscopic hysterectomy) and in their final supervisors reports. Rankings for specific areas were 4-5/5 for all trainees.

The number of procedures performed during the training period and is summarized in the following table:

Procedure	Mean number/trainee	Range for all trainees
All laparoscopies	458	276-572
Severe endometriosis	55	24-102
Laparoscopic hysterectomy	85	21-192
All hysteroscopy	110	8-244
Total endometriosis cases	301	211-377
Total number of procedures	699	402-936

Training sites showed wide variability in the types of procedures undertaken and the numbers performed, reflecting workload and the type of surgery performed at each individual training site. All sites met the targets for what a trainee would be expected to achieve in their training period.

These data support the initial concept of the AGES accredited training sites being able to project and complete a substantial surgical load for trainees that are employed at each accredited site. Ongoing data collection and analyses will ensure that these standards continue to be met.



## A step by step approach for fellows: laparoscopic hysterectomy

Stuart Salfinger

*Abstract not available at time of publication. Please check the conference app for updates.*

## Learning anatomy for laparoscopic surgery

Alfonso Rossetti

In the female pelvis the surgeon has to deal with different considerations.

- Specific anatomical land marks define the limits of the operating field as in any other surgical field.
- Nerve sparing surgery becomes mandatory to retain the function of the different organs.
- Pressure gradients in the different compartments play an important role in the postoperative success rate for suspension surgery.
- The interaction, anatomical and functional, of the different organs is very important to guarantee a normal behaviour, both on the sexual and voiding aspects of daily live.

These factors make surgery in the human female pelvis challenging. A thorough knowledge not only of pelvic anatomy, vascular-nervous- muscular-ligamental- fascial-virtual and physical spaces (foramina) and bony, but also of the mechanical forces and of the physiological processes is therefore necessary.

## SMAPPS Medical Apps to change patient care and medicine

Paul Wetter

This is a new era for innovation, communication, technology and science advancement that fosters a very rapid dissemination of new ideas from basic sciences to medical technologies.

Today, because of advances in materials science and miniaturization we carry in our pockets small "supercomputers."

Moore's Law, which has proven fairly accurate states that computing power doubles about every 18 to 24 months.

My role as a developer of educational materials on the Apple format was unique until earlier this year (2014) when attending a developers' conference and hearing the CEO of Apple Computer Tim Cook state through an Internet broadcast that he was welcoming the nine million app developers from around the world.

This is the closest thing to Moore's Law, but involves people not just computer chips.

Some of these people are working on scientific and medical problems and solving them. I call these "SMAPPS" for scientific and medical apps.

SMAPP are being designed to work with every kind of scientific and medical sensor you can imagine, to collect and analyze vast quantities of data from large numbers of people. This trend will blend into society over the next few years and names relating to them will be as common as terms like Twitter, Google, Wikipedia and Rollover.

Link this development trend to materials science with trends toward miniaturization and nanotechnology implementation of useful tools for society are limitless.

Writing this in 2015 there are already a very large number of medical and scientific tools that work with the SMAPP operating on the supercomputer in our pockets. These include ultrasonic transducers, oscilloscopes, retinal imagers, spectrometers; blood chemistry analyzers; vital sign trackers; and many more. We are only in the early stages of this trend. I think it is safe to say that it is possible today for a person in a major city almost anywhere in the world today to have more wellbeing sensors and detectors and data feeds than the Apollo astronauts who landed on the moon in 1970, or a patient in an ICU a decade ago. Each of us has far greater computing power in our pockets then all of NASA at that time.

The SMAPP and the advanced computer chips in our cell phones represent a giant leap for mankind and it is very exciting to live and work at a time when this is happening.



### **Pelvic floor surgery, transition to robotics**

**Greg Cario**

Despite the fact that the Robot was introduced into Australia over 10 years ago there has been a very slow uptake by gynaecologists compared to urologists. The uptake has been even slower for benign gynaecology. This was the identical picture in the early 1990s when Laparoscopic Hysterectomy was introduced with Laparoscopic Cholecystectomy. There was a reluctance from gynaecologists to change and embrace this new technology. As it was with the laparoscopic revolution, pelvic floor repair and incontinence surgery was the last thing to be adopted. A recent survey of Robotic Pelvic Floor surgery in Australia has shown that only 113 Robotic Sacrocolpopexies have been done to date and most of these by just 2 surgeons. There have been a handful of Colposuspensions and uterine suspensions only. Why is this? The reasons for this involve a complex interplay of training requirements, Hospitals, Health Fund reimbursements and of course access to these robots which has been very restricted by cost considerations. Just as in the early Laparoscopic Hysterectomy days there has as yet been no demonstrated advantage for this costly advancement at this time. Perhaps with time this will be shown to have major advantages as it did with Laparoscopic surgery. I will present a review of the current literature in relation to outcomes, cost effectiveness and training and share my early experience with these techniques including Robotic Burch and Robotic Hysterectomy and Sacrocolpexy with a video presentation. I will conclude by looking at the future of Robotics and pelvic floor surgery by looking at overseas trends. Laparoscopic surgery in pelvic floor reconstruction is now mainstream and open sacrocolpexy has largely been relegated to history. Will it be the same with Robotic pelvic floor repair?

### **Ambulatory surgery for stress incontinence - what is the current status?**

**Ajay Rane**

Mid urethral slings are now the main treatment modality for stress urinary incontinence. The journey from retropubic to trans obturator to single incision slings has been subjected to numerous research projects – some good, some not so good.

The data on intrinsic sphincter deficiency has seen a swing away from trans obturator slings towards retropubic slings. But has retraining of the surgeon occurred for this swing as well?

'Ambulatory' surgery means either a 'day surgery setting' in Australian terms or 'office setting' in American terms. Ambulatory surgery has numerous advantages for the patient, hospitals and the health dollar. But what makes ambulatory surgery in the treatment of stress urinary incontinence successful?

This paper discusses patient selection, anaesthesia, analgesia, surgical tips, trial of void protocols and follow up as key steps to successful ambulatory surgery for stress urinary incontinence.

### **Management of obstetric trauma Salwan Al-Salihi**

**Salwan Al-Salihi**

The incidence of perineal trauma causing injury to anal sphincter muscles during childbirth is expected to be between 0.5-1.5%. The calculated rate of occurrence is largely influenced by a wide range of variants and differs between countries. The obstetric anal sphincter injuries detection and management have entered a new age since the introduction of ultrasound in assessing suspected injuries. Advancements in Imaging have helped identifying both internal and external anal sphincter defects following mechanical trauma as a result of vaginal birth. However, the incidence of what is known as occult anal sphincter injury is suggested to be around 35% in primiparous women and 44% in multiparous women (1). That indicates that we are still behind in our methods of detection. In turn, it means that we are allowing for patients to develop long-term effects for their injuries and with late detection comes poorer outcomes. This is especially true in the incidence of women complaining of anal incontinence following obstetric trauma, which can be as high as 30-50% (2).

There is a ripple effect for obstetric trauma that may last the total length of individual's life. It also has multiple parallel repercussions involving sexual functions, marital relationships and even future pregnancies. Recent studies suggested that the actual life-long effects of such traumas are under examined (3). Management of obstetric trauma starts at a much earlier stage, outside the delivery suite. Like many other cases in medicine, there are no ideal solution or a "Silver Bullet" to prevent, treat and manage obstetric trauma. Managing affected patients often involves multidisciplinary teams, generous resources and dedicated services. It often starts with training doctors and midwives in the art of prevention for such traumas while being fully equipped to detect and treat them properly. However, there are a limited number of reversible factors that can be used to mitigate the risks in sustaining these injuries and the rest are not preventable. Appropriate short and long-term management is the key to providing healthier outcomes for these patients. As much as it



is vital for patients affected by such physical and in many cases psychological trauma to be managed appropriately, it is just as important for them to be followed up post-delivery.

Current literature suggests that long-term outcomes following primary repair of OASI are not encouraging (3). A significant number of affected women decide against further pregnancy and most symptomatic women who have further pregnancies opt to deliver by caesarean section. This in turn places significant pressure on public health services and on the hospitals. Management of the physical side of the trauma may be a short-term task that is attainable, however the psychological aspect should not be ignored.

The management of patients with perineal trauma requires the skills for detection, the training for repair, and the care for follow up. This review takes a snap shot of the services available for these patients and methods to address any pitfalls along the path of delivery for these services.

1. *N Engl J Med*, 1993. 329 (26): p. 1905-11.
2. *European Journal of Obst&Gyn and Repr Bio* 185 (2015);9-12.
3. *Int Urogynecol J* (2010) 21:927-932.

## Transvaginal mesh controversy - where to from here?

Marcus Carey

Vaginal prolapse is a condition in which the bladder, uterus and/or bowel protrude into the vagina, typically due to loss of natural support for the pelvic organs and the vaginal vault in women who had undergone a prior hysterectomy. In the normal female anatomy, direct support for the vaginal vault is provided by the parametrium (cardinal and uterosacral ligaments) and paracolpium fibers. These fibers act like suspensory ligaments and arise from the fascia of the piriformis muscle, sacroiliac joint and lateral sacrum, and insert into the lateral upper third of the vagina. Indirect support for the vaginal vault is provided by the levator plate, formed by the fusion of the right and left levator ani muscles between the rectum and coccyx. Pelvic organ prolapse and vaginal vault prolapse occurs after failure of these direct and indirect supporting mechanisms and is frequently accompanied by weakness of the muscular pelvic floor and suspensory fibers of the parametrium and upper paracolpium.

In developed countries around one in nine women undergo surgery for pelvic organ prolapse. In the United States, more than 400,000 operations for prolapse are performed on over 300,000 women annually for pelvic organ prolapse. Anterior and/or posterior colporrhaphy (native tissue repair) are the most commonly performed operations for pelvic organ prolapse.<sup>1, 2</sup> Anterior and/or posterior colporrhaphy was performed on 68.6% women undergoing prolapse surgery in 2003.<sup>1</sup> Many different vaginal, abdominal and laparoscopic procedures have been described to treat pelvic organ prolapse and there is currently no consensus on the most effective operation.

The lifetime risk of 11.1% for surgery to treat pelvic organ prolapse or urinary incontinence or both was reported by a study from a United States health maintenance organization and further surgery for recurrent prolapse and/or urinary incontinence was required in 29.3%. Dissatisfaction with native tissue repair (traditional colporrhaphy) for pelvic organ prolapse resulted in increased usage of mesh to augment vaginal repair procedures in order to obtain higher success rates. This peaked in 2010 and 2011. In 2010 around 196,000 (65%), 70,000 (23%) and 34,000 (11%) women underwent native tissue vaginal repairs, trans-vaginal mesh repairs and sacral colpopexy procedures respectively for pelvic organ.<sup>4</sup> However, the use of mesh placed via a transvaginal incision during vaginal repair procedures is controversial. Studies have reported significant problems (e.g. pain, dyspareunia and mesh exposure) with the use of mesh during vaginal prolapse. As a result of recent FDA (Food and Drug Administration) warnings about the usage of trans-vaginal mesh there has been a marked decline in trans-vaginal mesh usage and renewed interest in native tissue repair, sacral hysteropexy and sacral colpopexy. The role of trans-vaginal mesh should be limited to experienced surgeons for selected cases of anterior compartment prolapse (e.g. recurrent cystocele, stage III or IV cystocele).

Sacral colpopexy is widely considered to be the gold standard operation for pelvic organ prolapse particularly in cases of recurrent vaginal prolapse and prolapse of the vaginal vault following hysterectomy. The use of sacral colpopexy (especially laparoscopic and robotic procedures) to treat pelvic organ prolapse has increased in recent years coinciding with a dramatic decline in trans-vaginal mesh use as a result of recent Food and Drug Administration (FDA) warnings. In the United States the number of laparoscopic sacral colpopexies performed for prolapse exponentially increased during the 10 years from 2003 to 2012.<sup>5</sup> Among urologists in the US, in 2012, 70.1% of sacral colpopexies were performed by laparoscopy.

Prolapse of the uterus has traditionally been managed by vaginal hysterectomy and usually performed concomitantly with some form of vaginal surgery to re-support the vaginal apex (e.g. sacrospinous ligament fixation, trans-vaginal utero sacral ligament suspension). Up to 44% of women undergoing prolapse surgery have a concomitant hysterectomy. However, many patients with uterine prolapse are now requesting conservation of the uterus at the time of prolapse surgery. More recently laparoscopic and robotic procedures to re-support the uterus have been described.

Around 35% of women will require concomitant surgery for stress incontinence. Typically a TVT or TOT procedure is performed. However, recent research has questioned the value of concomitant anti-incontinence surgery for occult stress incontinence.

As a result of the ageing of western population it is anticipated that the rate of prolapse surgery will increase by 45% over the next 15 years. Very elderly patients, who are not sexually active, with prolapse requiring surgery can be safely and effectively managed by a colpocleisis procedure. In selected cases this can be performed under local anaesthesia. Vaginal pessaries will continue to have an



important role in the management of prolapse. More research on vaginal pessaries is needed in order to develop more effective pessaries than currently exist.

## Summary

Recent trends in POP surgery and the future role of mesh:

- Dramatic reduction in trans-vaginal mesh
  - Renewed interest in native tissue repair and sacral colpopexy (laparoscopic and robotic)
  - Trend towards uterine preservation (laparoscopic and robotic hysteropexy)
  - Around 35% of women will require concomitant surgery for stress incontinence but a trend away from concomitant surgery for occult stress incontinence
  - Trans-vaginal mesh in the anterior compartment only by experienced surgeons in carefully selected patients (e.g. recurrent cystocele; stage III and IV cystocele)
  - Increasing use of colpocleisis for elderly patients
  - Future advances in synthetic meshes, biological meshes and potential role of stem cells
  - Increasing interest in qualitative research when evaluating POP surgery outcomes
1. *Boyles SH, Weber AM, Meyn L. Procedures for pelvic organ prolapse in the United States, 1979-1997. Am J Obstet Gynecol. 2003; 188: 108-15*
  2. *Shah AD, Kohli N, Rajan SS, Hoyte L. The age distribution, rates, and types of surgery for pelvic organ prolapse in the USA. Int Urogynecol J 2008; 19:421-428.*
  3. *Olsen AL, Smith VJ, Bergstrom JO, Colling JC, Clark AL. Epidemiology of surgically managed pelvic organ prolapse and urinary incontinence. Obstet Gynecol 1997; 89: 501-6.*
  4. *Food and Drug Administration (2011) Urogynecologic surgical mesh: update on the safety and effectiveness of transvaginal placement for pelvic organ prolapse. Available at: <http://www.fda.gov/MedicalDevices/Safety/Alerts>*
  5. *Eltermean DS, Chughtai BI, Vertosick E. et al. Changes in Pelvic Organ Prolapse Surgery in the Last Decade among United States Urologists. J Urol 2014; 191: 1022-7.*

## Digital Free Communication Abstracts

### Diaphragmatic endometriosis: What should be expected? A case report

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#### Introduction

Endometriosis can be defined as the occurrence of endometrial tissue (glands and stroma) outside their typical intrauterine site. These ectopic endometrial implants are usually located on the pelvic organs and walls, but can occur nearly anywhere in the body. Clinical manifestations of such condition could range from totally asymptomatic to severely debilitating symptoms depending on the site and extent of the ectopic endometrial implants. This is a case report of a 33 year old woman with diaphragmatic endometriosis that was managed by laparoscopic excision.

#### Case presentation

A 33 year old Nulliparous patient, with known Stage IV Endometriosis, represented with new symptoms of cyclical right sided shoulder and neck pain and dyschezia. Investigation with MRI confirmed the presence of diaphragmatic endometriosis and a rectal nodule. After careful counselling the patient decided to proceed with laparoscopic excision. Pre-operative work-up included consultation with Cardiothoracic Surgery, who advised on management of any potential complications likely to be encountered intra-operatively.

#### Comments

Physicians should have a clear preoperative plan regarding the possible complications they might face as they operate in such cases. Moreover, they should anticipate several intraoperative issues such as the patient positioning, location of port sites insertion, how to reach the lesions and the possible approach of excision of the diaphragmatic endometrial implants. These points will be discussed in details in our report as long with video footage of the excisional surgery.

### Case study: Presentation and Surgical Management of an Accessory Uterine Cavity

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#### Introduction

An accessory uterine cavity can be an unusual cause of persistent cyclical pelvic pain.



## Case

25 year old female with longstanding cyclical dysmenorrhoea. No improvement on oral contraceptive pill, depot or Mirena IUD despite amenorrhoea.

## Management

Hysteroscopy showed a normal cavity with both ostia seen. Diagnostic laparoscopy showed a 3cm uterine mass adjacent to left round ligament and tube. Ultrasound showed 24mm left cornual thick walled mass with central haemorrhagic material and a normal renal tract. MRI diagnosed an accessory uterine horn with haematometra.

Operative laparoscopy was performed to excise the accessory uterine cavity.

The patient made an unremarkable post operative recovery with resolution of her symptoms. Histopathology confirms myometrium and endometrium consistent with an accessory uterine cavity.

## Discussion

Congenital anomalies of the uterus should be considered in the differential diagnosis of persistent cyclical pelvic pain. Accessory uterine cavity can be an unusual subtype. Ultrasound and MRI can aid in the diagnosis. Definitive laparoscopic surgical management can result in resolution of symptoms.

Imaging and operation pictures/video will be presented.

## Hysteroscopic management of retained products of conception post Cesarean section, Two Case Reports and Review of the Literature

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2. *Obstetrics and gynaecology, Asaf Harofe Medical Center, Zerifin, Israel*

## Aim

To present two cases of hysteroscopy for treatment of Retained Products of Conception following Cesarean Section and current evidence in the literature.

## Introduction

Retained products of conception (RPOC) may occur after medical and surgical pregnancy termination, miscarriage, and vaginal or cesarean delivery. Short-term complications of RPOC include bleeding and infection, while long-term complications include formation of intrauterine adhesions (IUA, also called Asherman's syndrome). The pathogenesis of IUA formation is complex, involving trauma to the endometrium compounded by the hypoestrogenic state common in the puerperal period. The traditional surgical treatment of RPOC with dilatation and curettage may further contribute to endometrial trauma. In 1997, Goldenberg et al. reported on the use of hysteroscopy for treatment of RPOC. Since that time, additional studies have reported increasing experience with this technique. Using this approach, the uterine cavity is first evaluated and areas with suspected RPOC are identified. Subsequently, using the loop of the resectoscope as a curette, the RPOC are gently and selectively separated from the underlying endometrium. During this procedure, the use of electrosurgery is used sparingly and avoided if possible, with the goal of minimizing thermal damage to the endometrium.

## Case 1

Adherent placenta was noted during Cesarean Section and was only partially removed. A follow-up hysteroscopy demonstrated retained products of conception and hysteroscopic resection was performed. Another procedure was required due to incomplete excision of the retained products in the first procedure.

## Case 2

Patient Presented with persistent vaginal bleeding following delivery by cesarean section. Hysteroscopy demonstrated a caesarean section niche and retained products of conception in the uterine cavity. The patient underwent hysteroscopic resection.

## Review of the literature

Only one study compared the rates of IUA following hysteroscopy and curettage, precluding a meta-analysis comparison of the two techniques. There were no cases of incomplete RPOC removal. Three perioperative complications occurred (uterine perforation, infection, and vaginal bleeding). IUA on follow-up hysteroscopy were found in 4/96 women (weighted rate of 5.7%, 95% CI 2.4%, 13.0%). Of the 120 women desiring a subsequent pregnancy 91 conceived (weighted rate of 75.3%, 95% CI 66.7%, 82.3%).

## Conclusion

The lack of traditional curettage comparison groups in most studies precludes the conclusion that hysteroscopy is superior to traditional curettage, but this procedure does appear to have low complication rates, low rates of IUA, and high rates of subsequent pregnancies.



## The use of barbed sutures in minimally invasive hysterectomy: a literature review

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Barbed sutures have been approved for use in Australia since 2008 with the introduction of the Quill suture by Surgical Specialties Corporation, followed by the V-Loc suture in 2011 by Covidien, and most recently the Stratafix by Ethicon in 2014. The suture is designed with either uni- or bi-directional barbs circumferentially along the suture, with a suture needle at one end and a loop at the other. They come in a range of weights and absorption profiles. As a result of eliminating the need for technically difficult and time consuming laparoscopic knot tying, they have gained popularity for the closure of the vaginal vault at total laparoscopic & robotic hysterectomy. There has been scrutiny about its use in gynaecological surgery, and some concern regarding the risk of wound dehiscence, post operative sexual dysfunction and bowel injury. As such, to evaluate the validity of these concerns, we have reviewed the literature regarding the use of barbed sutures in closure of the vaginal vault at minimally invasive hysterectomy.

We identified nine studies regarding the use of barbed sutures in closure of the vaginal vault at robotic of laparoscopic hysterectomy. At the time of review, there was one case report of bowel injury related to closure of the vaginal vault with a barbed suture. All reviewed studies showed barbed sutures to have similar or reduced operating time, and have no statistical difference in vaginal cuff dehiscence, intra or post operative bleeding or post operative sexual dysfunction. There have been one case reports of bowel injury secondary to its use for closure of the vaginal vault but this was not seen in several large studies of using barbed sutures. Although serious, this is likely to be a rare complication of using barbed sutures, and is possibly related to length of the tail on the suture. Larger studies would be required to find its incidence.

## Laparoscopic removal of ovarian vein coils

Philip Thomas, Kim Dobromilsky, James May

We present two cases of women with history of chronic pelvic pain (CPP) who underwent left ovarian vein coil embolisation for presumed pelvic congestion syndrome. Both women had previously had normal diagnostic laparoscopies prior to coil insertion. Both women continued to have pain despite embolisation and requested removal of coils. We illustrate the operative technique via video.

In the first case the pelvis displayed a bulky left ovary with tortuous left ovarian veins inferior to the coils. The coils had been partly extruded through the wall of the ovarian vein, lay adjacent to the sigmoid colon and left ureter at the level of the pelvic brim and were surrounded by adhesions. The coils extended from the level of the left fallopian tube superiorly to the mid paracolic gutter, and were able to be removed with the left ovary and its vascular pedicle. There was no evidence of endometriosis either macroscopically or histologically via biopsies.

In the second case it was clear on inspection that the patient had widespread endometriosis, with deep deposits in the left pelvic side wall and uterosacral ligament, Pouch of Douglas and right paracolic gutter. These nodules were excised and endometriosis confirmed via histology. The coils were also readily visible through the wall of the ovarian vein and lying over the left iliopsoas and left ureter.

CPP is a common presentation in gynaecology and causative pathology is often missed. Both the diagnosis of Pelvic Congestion Syndrome (PCS) and the use of coil embolisation to treat it are controversial. There are no systematic reviews published to show causation evidence between PCS and CPP. In addition, if causation were established there are no good quality primary randomised controlled trials to show that embolisation is effective.<sup>1,2,3</sup>

There is no precedent in the literature regarding laparoscopic removal of ovarian vein coils for this indication.

1. Tu FF, Hahn D, Steege JF. Pelvic congestion syndrome-associated pelvic pain: a systematic review of diagnosis and management. *Obstet Gynecol Surv* 2010; 65(5):332-40
2. Ball E, Khan KS, Meads C. Does pelvic congestion syndrome exist and can it be treated? *Acta Obstet Gynecol Scand* 2012; 91(5):525-528
3. Robertson M, McCuaig R. Pelvic congestion syndrome. *AJUM* 2013; 16(1):26-29

## Laparoscopic resection of interstitial ectopic pregnancy (1426)

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This video is of laparoscopic wedge resection of an 11/40 pregnancy with a single embryo in the right interstitium of the uterus with haemoperitoneum.

The background history is of a 31 year old woman G4P2, referred for a tertiary level Ultrasound scan when previous Ultrasound reported a uterine pregnancy with an unusual position. She had a history of sudden onset severe lower abdominal pain with unknown LMP and no PV bleeding.



Her background history includes two normal vaginal births and a right salpingectomy due to right tubal ectopic pregnancy. She had no other significant medical or surgical history.

Upon Presentation, she was noted to have a tender abdomen with rebound tenderness. Her Haemoglobin dropped from 135 to 91. On Ultrasound, she had Endometrial thickness of 18mm, 500mls of free fluid in the pelvis, and a gestational sac with an embryo CRL 44mm with a fetal Heart rate of 180 bpm in the right cornua of the uterus consistent with interstitial pregnancy at the sight of previous salpingectomy.

She subsequently underwent emergency laparoscopy. At laparoscopy haemoperitoneum and bleeding right cornual ectopic noted. Using monopolar and bipolar energy modality, a wedge resection was performed and the sac removed. Haemostasis was achieved with bipolar to the base. Myometrium repaired using two layer closure with interrupted vicryl sutures to first deep layer and continuous V-Lock suture to second layer layer. Estimated Blood loss was 1800mls. A drain was inserted and patient received three units of packed red blood cells.

Her haemoglobin on day 1 post-operatively was 101, her drain and IDC were removed and she made a good recovery and was discharged on day 2 post-operatively. She was followed up in the gynaecology clinic, counselled regarding future pregnancy management and had an implanon device inserted for contraception.

Of all ectopic pregnancies, almost 95% of pregnancies are implanted in the various segments of the fallopian tubes, 2.1% of extra-tubal ectopics are found to occur in the cornua of the uterus. Cornual pregnancy is often misdiagnosed as an intrauterine pregnancy because its implantation site is so close to the uterine cavity. Management ranges from conservative, medical or surgical. The implications for future pregnancies, subsequent mode of delivery, and surgical technique are also explored.

1. *Grobman W A, Milad M P. Conservative management of a large cornual ectopic pregnancy. Hum Reprod 1998; 13(7): 2002-2004*
2. *Tulandi T, Vilos G, Gomel V. Laparoscopic treatment of interstitial pregnancy. Obstet Gynecol 1995; 85(3): 465-467*
3. *Moon H S, Choi Y J, Park Y H, Kim S G. New simple endoscopic operations for interstitial pregnancies. Am J Obstet Gynecol 2000; 182: 114-121*

## Tips to mitigate litigation risk of a migrated Mirena IUD combined with laparoscopic repair of dehiscd C-section scar

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### Introduction

IUD is one of the most common reversible forms of female contraception, with Mirena being the most popular IUD choice. A rare complication of IUD insertion is uterine perforation, with reported incidence ranging from 0.5 to 2.5/1000. Recognised risk factors for uterine perforation include insertion in the post-partum period, lactation, uterine retroversion, tight cervical os and unsatisfactory insertion technique.

### Case report

A woman had Mirena insertion at the 6-week postpartum visit after undergoing elective C-section delivery. She had encountered partial C-section abdominal wound haematoma in the immediate postoperative phase. At the time of IUD insertion, she experienced momentary sharp pain and dizziness. Due to intermittent lower back pain, she returned for assessment 8 weeks later. As the IUD string was not seen at cervical os, she was referred for pelvic ultrasound and AXR which demonstrated that the IUD was lying free in the abdominal cavity.

### Discussion

The preoperative evaluation and counselling suggest the case was a potential medico-legal risk. A team approach was instigated preoperatively, combined with successful intra-operative laparoscopic retrieval of the migrated IUD embedded in the omentum and prompt repair of the dehiscd C-section scar resulted in a happy outcome to the case.

### Conclusion

Mitigation of potential litigation risk requires careful preoperative and peri-operative counselling and team approach.

## Laparoscopic entry in the presence of a large ovarian cyst

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### Background

Laparoscopic surgery has revolutionised the way gynaecological conditions are managed. It has many benefits such as less postoperative pain, shorter hospital stay and reduced minor complications (1). This was facilitated by the advent of video cameras and instruments which allowed access into the peritoneal cavity. Despite no consensus on the best entry technique, there are numerous studies and guidelines to assist surgeons to make a choice. The knowledge of different techniques is crucial as half of major



complications occur at the time of initial entry (2). Hence, one could say that the success of laparoscopic surgery lies first and foremost with the safe abdominal entry. The closed technique with a Veress needle is most commonly used by gynaecologists worldwide (3). However, one should not hesitate to adopt a different approach as guided by clinical indications.

This case demonstrates the use of the open technique, Hasson, in a patient with a large ovarian cyst with a previous laparotomy.

#### Case

A 48 year-old female had a laparoscopic left salpingo-oophrectomy performed for a 30cm left ovarian cyst with normal tumour markers. She previously had laparotomy and right salpingectomy for ectopic pregnancy.

Upon the successful entry by using the open technique, pneumoperitoneum was created with carbon dioxide. Five accessory ports were used to secure a surgical field. This enabled an evacuation of a significant amount of clear fluid, 6L, from the left ovarian cyst before salpingo-oophrectomy was performed.

Her postoperative recovery was uneventful and she was discharged the following day.

#### Conclusion

In order for the actual laparoscopic procedure to take place, successful entry into the peritoneal cavity must occur. Two commonly used techniques are the closed technique using a Veress needle or open Hasson technique. The Veress needle allows a quick entry and has been more widely adopted by gynaecologists. However, this is associated with an increased risk of major vascular complications compared to the open technique. The Hasson takes place under a direct vision which makes this more useful if there are concerns for adhesions. The disadvantage is a longer operative time.

For this patient, the Hasson was chosen in view of a large cyst size and previous laparotomy. Inadvertent puncture of the cyst was avoided by employing the direct visual approach. This allowed inspection of the integrity and nature of the cyst prior to removal. The benign clinical appearance of the cyst was proven histologically.

This illustrates the importance of being familiar with pros and cons of different entry techniques in order to yield a successful beginning to laparoscopic surgery.

## Non-Tubal Ectopic Pregnancies

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#### Introduction

Ectopic pregnancies occur in approximately 1% of pregnancies<sup>1</sup>. The fallopian tubes are the most common site for ectopic pregnancies. Non-tubal ectopic pregnancies refer to those implanted in locations other than the fallopian tubes, and account for 5.0%-8.3% of ectopic pregnancies<sup>2</sup>. Most literature in this area has been restricted to small case reports and series, with limited data on optimal protocols.

#### Objective

The objective of this study is to compare the various management regimens for non-tubal ectopic pregnancies. Treatment modalities included single- or multi-dose methotrexate, intrasac methotrexate injection with or without potassium chloride, surgical treatment and combination regimens. The main outcome of interest was the success of initial planned management, or whether further unplanned intervention was required. Secondary outcomes studied were time to resolution, determined as achieving  $\beta$ HCG < 20IU and/or resolution on ultrasound, and complications.

#### Methods

This was a retrospective audit of 114 consecutive non-tubal ectopic cases identified by imaging at a tertiary women's health hospital in Melbourne, Australia, from January 2004 to November 2014. We examined pregnancy sites, risk factors, clinical presentation, US/MRI imaging results and other demographic data, whilst assessing results of treatment modalities. Timing to resolution and complications were recorded.

#### Results

A diagnosis of non-tubal ectopic pregnancy was made on imaging for 114 pregnancies. Nine pregnancies originally diagnosed as non-tubal ectopics were excluded: at surgery, 7 were found to be tubal, whilst 2 pregnancies diagnosed as ovarian ectopics were re-classified as pregnancies of unknown location. Three further cases, diagnosed at our institution, were managed elsewhere and were excluded. (n=102)

Ectopic site classification following complete investigation included: 1 abdominal, 33 caesarean scar, 13 cervical, 42 cornual/interstitial, 2 heterotopic, and 14 ovarian.



Treatment regimens were: 4 expectant, 77 methotrexate, 10 surgical, and 11 combination regimens.

Primary management plan was successful in 75 pregnancies (74%): 65 had no complications and required no further intervention, 4 required additional systemic methotrexate doses or KCl injection, and 6 had unexpected complications arising from the planned treatment.

Eighteen cases (18%) required a different, unplanned management approach and the primary management plan was considered unsuccessful.

Nine cases were transferred to other hospitals prior to resolution of their  $\beta$ HCG and thus the success of their management remains inconclusive.

#### Conclusion

This study illustrates the common clinical scenarios and summarises the treatment options for non-tubal ectopic pregnancies. Critical appraisal of the described outcomes will guide an evidence-based clinical approach to the management of this condition.

1. *Hajenius PJ, Mol F, Mol BWJ, Bossuyt PMM, Ankum WM, Van der Veen F. Interventions for tubal ectopic pregnancy. Cochrane Database of Systematic Reviews 2007, Issue 1. Art. No.: CD000324. DOI: 10.1002/14651858.CD000324.pub2.*
2. *Shen L, Fu J, Huang W, Zhu H, Wang Q, Yang S, Wu T. Interventions for non-tubal ectopic pregnancy (Protocol). Cochrane Database of Systematic Reviews 2014, Issue 7. Art. No.: CD011174. DOI: 10.1002/14651858.CD011174.*

## Ovarian torsion in pregnancy: Video case report and review of the literature

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#### Background

The estimated incidence of adnexal masses in pregnancy range from 2% to 10%, with the majority resolving spontaneously.<sup>1</sup> Ovarian torsion (OT) is a rare complication of pregnancy with most occurring in the first or second trimester.<sup>2</sup> Prompt diagnosis and intervention is required to prevent irreversible sequela such as ovarian necrosis, peritonitis, reduction in reproductive potential and may also threaten the pregnancy. Antepartum diagnosis of OT can be challenging as clinical, imaging and laboratory findings are often non-specific.

#### Case report

We illustrate a 28-year-old woman, G3P2 who presented with right sided abdominal pain at 17 weeks gestation with a monochorionic diamniotic twin pregnancy. Her previous obstetric history included a vaginal delivery and an elective caesarean section for breech presentation at term. Her antenatal care had otherwise been unremarkable. The pain was acute in onset and associated with nausea and vomiting. Her observations were stable and she was afebrile, preliminary blood investigations revealed normal inflammatory markers. Clinical examination revealed tenderness in the right lower quadrant and no other signs of an acute abdomen. Pelvic ultrasound demonstrated an uncomplicated twin pregnancy and a right ovary containing a 4.5cm cyst with no definitive vascularity on colour Doppler suggestive of ovarian torsion. The patient clinically improved with expectant management and analgesia and was discharged after 2 days of observation. She represented the same day with worsening right sided pain, vomiting, low grade temperature and clinical features of an acute abdomen. The inflammatory markers were raised during readmission with CRP of 30 mg/L and WCC of 13.7 x10<sup>9</sup>/L (neutrophilia). An emergency exploratory laparoscopy took place after perioperative use of a tocolytic, which confirmed torsion of the right ovary and a 4cm ovarian cyst. The ovary was detorted and the cyst drained where fluid was sent for cytology. The patient made an uneventful postoperative recovery and discharged 2 days following surgery. She proceeded to have an uneventful pregnancy and delivered at term by caesarean section where the ovaries were found to be normal in appearance.

A video presentation of a laparoscopic detorsion and cyst drainage during second trimester of pregnancy will be demonstrated. A review of the existing literature of the available diagnostic work up, treatment options and the challenges faced in managing this gynaecological emergency in pregnancy will be discussed.

1. *Schwartz N., Timor-Tritsch IE., Wang E. Adnexal masses in pregnancy. Clin Obstet Gynecol, 2009;52(4) 570-85.*
2. *Sasaki KJ., Miller CE. Adnexal Torsion: Review of the Literature. The Journal of Minimally Invasive Gynecology. 2014;(21) 196-202*

## How have Australian Gynaecologists embraced Robotic surgery compared to the rest of the world? A review of our progress to date

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Robotic surgery was introduced into Australia over a decade ago. The urologists adopted this new technology enthusiastically as the surgeons did 25 years ago with Laparoscopic Cholecystectomy. Once again the gynaecologists were slow to adopt this technology with

the exception of a few oncological pioneers. In Australia the uptake of the Robot for benign gynaecology has been even slower than expected. Using the database from Device technology, the distributor of the Da Vinci Robot, we have analysed the numbers of cases and the types of operations performed on a state by state basis since the Robot was introduced to try to look into some of the factors affecting current national trends. We have compared these results with European countries, the UK and the US. We discuss the various issues related to this poor uptake.

## Consequences of Uterine Herniation Through The Inguinal Canal - A Hermaphrodite's Story

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A true hermaphrodite is one of the rarest disorders of sexual differentiation. The commonest presentation is abnormal external genitalia, but can range from normal male to normal female in appearance. Other presenting symptoms can be haematuria, amenorrhoea, lower abdominal pain and even inguinal hernia.

Presented here is a case of a true hermaphrodite who presented with an inguinal hernia.

## Single Incision Cuff Closure Made Easy

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The most difficult step in single site total laparoscopic hysterectomy is cuff closure. This occurs because of the inherent narrow manipulation angle forcing all 'straight stick' instruments into parallel. Techniques employing single handed suturing or the use of the Endostitch device have made laparoscopic cuff closure possible but each has its own limitations.

We present here the learning curve for cuff closure as well as a novel approach to laparoscopic suturing using a vertical closure technique.

## Use of other treatment before hysterectomy for benign conditions - what about PCS and CD 10?

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Corona et al [Corona LE, Swenson CW, Sheetz KH, et al. Am J Obstet Gynecol 2014;212:x.ex-x.ex. Use of other treatments before hysterectomy in benign conditions in a state wide hospital collaborative.] in a large retrospective review of the histopathological findings after hysterectomy found that: the frequency of unsupportive pathology was higher in women aged <40 and highest among women with endometriosis or chronic pain.

Pelvic Congestion Syndrome (PCS) was first described by Taylor in 1949 and is a well recognised cause chronic pelvic pain. Beard's review of PCS found the mean age of their patients was 32.4 years. Abnormal adenexal vascularity was not an outcome in the study of Corona et al.

Traditional histological preparation of tissues in cases of suspected endometriosis has a significant false negative rate. Published series from respectable units have found that over one third of surgically obtained biopsies of endometriosis are histologically negative on H&E staining, with higher rates of negativity with lower graded disease.

Ivo Brosens reported that in up to one third of 'chocolate cysts' no specific pathology can be found. We (10th World Congress of Endometriosis, 2008, Melbourne: [www.rfay.com.au/docs/cd10poster.pdf](http://www.rfay.com.au/docs/cd10poster.pdf)) and others have described ovaries with 'chocolate cysts' and negative for endometrial epithelium yet positive immunohistochemical staining for CD 10, a marker for endometrial stromal cells.

Groisman and Meir<sup>2</sup> retrospectively studied 20 cases of histologically equivocal endometriosis ('suspicious of', 'suggestive of' or 'compatible with') and found that 85% stained positive for CD10, confirming the diagnosis. Potlog-Nahari et al<sup>3</sup> using CD10 immunohistochemical staining in 31 women with chronic pelvic pain, found the technique almost doubled their diagnosis of Stage I endometriosis. We found that of the 31 histologically (H&E) negative patients, 24 (77%) were found to be CD10 positive.

These facts, I believe, call into question the therapeutic conclusions in the study of Corona et al.

1. *Beard RW, Reginald PW, Wadsworth J. Clinical features of women with chronic lower abdominal pain and pelvic congestion. BJOG 1988;95:153-61.*
2. *Groisman GM, Meir A. CD 10 is helpful in detecting occult or inconspicuous endometrial stromal cells in cases of presumptive endometriosis. Arch Pathol Lab Med 2003;127:1003-6.*
3. *Potlog-Nahari C, Feldman AL, Stratton P, et al. CD 10 immunohistochemical staining enhances the histological detection of endometriosis. Fertility & Sterility 2004;82:86-92.*



## Laparoscopic management of suspected benign giant ovarian cysts

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Giant ovarian cysts superior to 20 cm are rare and pose several problems in terms of surgical strategy. Because of the difficulty to achieve safely a pneumoperitoneum, and in order to extirpate the cyst without spilling the content (which would expose to a contamination of the abdominal wall and the peritoneal cavity), a large midline laparotomy is usually the classic proposed route. Nevertheless, when the cyst is presumed benign, the laparoscopic route offers several advantages: patient's comfort and quicker recovery, cosmetic prejudice reduced, complete exploration of the abdominal cavity from the pouch of Douglas to the diaphragm.

This digital communication presents 2 observations:

A 40-year-old G0P0 lady presenting with a left adnexal cyst measuring 25 x 20 x 12 cm, and a 62-year-old G2P2 lady, with a background of vaginal hysterectomy, and previous laparotomy for cholecystectomy with a biliary tract stone, referred with a suspected left ovarian cyst (25 x 14 x 23 cm).

In each case the cyst had thin wall, no granulations, and there was no ascites. In both cases, the tumour markers were normal, and the malignancy risk index was low.

In the first case, the patient was managed purely laparoscopically (Hasson entry, peritoneal exploration, aspiration of the content under visual control without any spillage, closure of the hole with a PDS endoloop\*, left salpingo-oophorectomy with a Ligasure\*). The final histology was mucinous cystadenoma with borderline contingent.

In the second case, the patient was managed with a combination of a 5 cm mini laparotomy and laparoscopy. The use of an Alexis\* retractor allowed the access to the cyst and the clean aspiration of the content with a suction cannula after confection of a purse string. The obturator cap of the Alexis\* allows a tight pneumoperitoneum without gas leak, and a laparoscopy was then performed. The protocol was similar to the first case (peritoneal exploration, bilateral salpingo-oophorectomy with a Ligasure\*). Frozen section confirmed a mucinous cystadenoma.

In this digital communication, we will present operative pictures, and discuss the advantages and flaws of each strategy.

Even though non-consensual, the management of large ovarian cysts with isolated liquid content can certainly be performed safely via laparoscopy. A recent refinement of the technique is the use of the small Alexis Laparoscopic System with Kii Fios which retracts a 2.5 - 6cm incision and gives good access to the cyst for the initial approach.

## Unexplained Prelabour Broad Ligament Bleeding in a Preterm Primigravida

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A 25-year-old G1P0 who was 24 weeks pregnant was admitted with suspected acute abdomen. There was no history of trauma and she was stable from an obstetric point of view with unremarkable blood results. Her abdominal symptoms were progressive and she underwent diagnostic laparoscopy.

After atraumatic Hassan entry at the umbilicus a significant haemoperitoneum including old clot was found, estimated around 800mls, with a Haemaccue drop to 70g/L from 117 g/L on initial presentation. Exploration revealed normal appearing ovaries and tubes but defects were noted in the broad ligaments with ongoing fresh bleeding.

Access was difficult due to the gravid uterus and conversion to midline laparotomy proceeded. Bilateral full thickness defects of the broad ligaments were noted with multiple exposed bleeding vessels which were sutured to achieve haemostasis. A Blake drain was left in and the abdomen closed.

The patient remained stable and discharged home on day 11 post surgery. At this stage the pregnancy continues with no apparent foetal effects on ultrasound assessment.

Very few cases of atraumatic rupture of the broad ligament in pregnancy have been reported, and none previously with ongoing pregnancy after diagnosis. In humans, one case was assumed to be secondary to horse carriage riding a week prior to symptoms and the other was associated with cocaine abuse<sup>(1)</sup>. Broad ligament injury after trauma is equally rare with a single case reported post pelvic fracture associated with a severe MVA<sup>(2)</sup>. In addition, there have been a few case reports of spontaneous broad ligament tear intrapartum.

One study on 31 pregnant mares that died of broad ligament haematoma peripartum suggested arterial injuries most commonly happen in the proximal uterine artery. Atrophy of smooth muscle cells with fibrosis of the arterial wall was one of the predisposing factors found on pathology examination<sup>(3)</sup>.

1. Chowdhury R, Ahern T, McKenzie-Gray B. Prelabour rupture of the broad ligament in a primigravida. *BJOG*.2004 Feb;vol III,p.181



2. Malhotra N, Malhotra B, Deka D, Takkar D. Broad ligament hematoma causing fetal death in a case of fractured pelvis. *Eur J Obstet Gynecol Reprod Biol.* 2001 Sep;98(1): 131-2 33
3. Ueno T, Nambo Y, Tajima Y, Umemura T. Pathology of lethal peripartum broad ligament haematoma in 31 Thoroughbred mares. *Equine Vet J.* 2010 Sep;42(6):529-

## Total laparoscopic hysterectomy: Single surgeon experience in a regional centre after changing uterine manipulator and surgical technique

**Raymond Steve, Hasan Titiz**

### Introduction

The advantages of total laparoscopic hysterectomy (TLH) include less blood loss, fewer wound complications, less post-operative pain, quicker recovery, quicker return to normal activity and work, when compared to abdominal hysterectomy (1). But total laparoscopic hysterectomy can be challenging and may require experienced surgical assistance (fellow, another gynaecologist) and experienced theatre team. Uterine manipulator is essential for this challenging operation and having better instruments and easier surgical steps can simplify TLH.

### Setting and design

This gynaecologist (the first author), working in a non metropolitan private hospital, has started doing laparoscopic hysterectomies in 1995. He has decided to do TLHs for all patients requiring non vaginal hysterectomy for benign disease in an unselected gynaecological population in 2011. 112 TLH procedures were planned from January 2011 to March 2014. In these cases, combination of Valtchev uterine manipulator and McCartney tube were used. Conversion to laparotomy was required for 12 patients. There was 2 bladder injury and no ureteral, bowel or vascular injuries.

In April 2014, new instrumentation (Titiz utero-vaginal manipulator) and a standardized surgical technique starting with a laparoscopic anterior colpotomy were used<sup>2</sup>. 52 TLH procedures have been undertaken since and all were completed laparoscopically. The mean hospital stay was 2 days. There were no major complications. No ureteral, bladder, bowel or vascular injury occurred.

### This video demonstrates:

1. Data analysis of the TLHs before and after changing uterine manipulator and surgical technique.
2. Benefits of this new utero-vaginal manipulator and surgical technique
3. Video demonstration of step-by-step surgical technique of TLH with the use of new utero-vaginal manipulator in easy and difficult cases.

### Conclusion

The data and the surgeon's experience show that introduction of the new instrumentation and standardized surgical technique has led to:

1. Reduced operating time
2. Reduced conversion to laparotomy rate
3. Easier use of utero-vaginal manipulator when there is only inexperienced surgical and theatre staff assistance available
4. Less bladder injury.

1. Nieboer TE, Johnson N, Lethaby A, et al Surgical approach to hysterectomy for benign gynaecological disease. *Cochrane Database Syst Rev* 2009;CD003677
2. Titiz H, Total laparoscopic hysterectomy in 3 easy and safe steps with Titiz utero-vaginal manipulator. *AGES, ASM, March 2014, AAGL, ASM, November 2014*

## Tips and Tricks: Pre-Conceptional Laparoscopic Cervical Cerclage Made Easier and Safer with Titiz Uterovaginal Manipulator

**Hasan Titiz**

### Introduction

Cervical incompetence or cervical insufficiency is one of the causes of preterm birth. Incidence is 0.1-1 % of all pregnancies(1). Traditionally cervical cerclage is placed vaginally, but sometimes it is not possible to do vaginally.

Then it needs to be inserted abdominally either by laparotomy or laparoscopy. Laparoscopic cervical cerclage is indicated when vaginal cerclage has failed or vaginal cerclage is not possible due to deficient or short cervix from previous cervical surgery. Although laparoscopic cervical cerclage has a good success rate(90-100% live birth)(1), it has risk of injury to bladder, sigmoid colon and uterine vessels(1). It is also important to put the suture in the right place, which is at the internal cervical os (cervico-isthmic junction) and medial to the uterine vessels. Therefore it can be a challenging operation, especially when the uterus is bulky and more vascular due to adenomyosis or fibroids.



## Case

A 32 year old woman, G0P0, with the surgical history of cone biopsy presented with the history of infertility. On vaginal examination, there was no vaginal portion of the anterior cervix and there was only 0.5 cm of vaginal portion of the posterior cervix. After extensive counselling, the decision has made to do pre-conceptual laparoscopic abdominal cerclage. This video demonstrates tips and tricks on:

1. How to determine anatomic relations between bladder, uterine vessels, cervico-vaginal junction and cervico-isthmic part of uterus.
2. How Titz utero-vaginal manipulator helps to dissect the bladder and uterine arteries and veins safely. 3. To determine where and how to pass the sutures.

## Result

Patient was discharged same day and did not have any post-operative complications. Patient had transvaginal ultrasound one week after the operation. Tape was shown to be at the internal cervical os level.

## Conclusion

Titz utero-vaginal manipulator can make pre-conceptual laparoscopic abdominal cerclage safer and easier.

1. *Tulandi T et al. Pre and post-conceptual abdominal cerclage by laparotomy or laparoscopy J Minim Invasive Gynecol 2014;21:987-983.*

## Laparoscopic Resection after Ectopic Pregnancy in Rudimentary Uterine Horn with Hypoplastic Vagina

**Brian Tsai<sup>1</sup>**, Ken Roper<sup>2</sup>, Trupti Kanade<sup>1</sup>, Joanne McKenna<sup>1</sup>, David Rosen<sup>1</sup>, Greg Cario<sup>1</sup>, Danny Chou<sup>1</sup>

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Ectopic pregnancies occupying a rudimentary uterine horn are rare and occur in 1 in 76000 pregnancies. With increasing gestational age and size, the rudimentary horns have a high risk of rupturing (approximately 50%), causing massive intraperitoneal haemorrhage and significant morbidity and mortality. Here we present a case that underwent foeticide via intracardiac potassium and methotrexate, with an interval laparoscopic removal of the rudimentary horn in several months' time, but the surgical resection became urgently necessary due to a hypoplastic vagina communicating with the rudimentary horn.

This 33-year-old patient has known left unicornuate uterus with right rudimentary horn diagnosed by previous laparoscopy and hysteroscopy. In the ensuing year, an embryo transfer into the left uterine horn. She had a spontaneous vaginal delivery at 33 weeks. In the current pregnancy, ultrasound demonstrated an intrauterine gestation in the right uterine horn with no communication with the cervix. At 10 weeks of gestation, foeticide was achieved by intrathoracic KCl and intraplacental methotrexate. Fetal asystole was confirmed thereafter. A plan to allow involution of gestational tissue prior to definitive surgery was made. Two weeks later vaginal bleeding commenced with dull cramping, which both intensified. A decision was made to perform surgery later that day.

Examination under anaesthesia revealed a single cervix with a single external os that was deviated to the left. Diagnostic hysteroscopy was performed finding a narrow and long cavity with a left ostium consistent with a unicornuate uterus. No communication with the right side could be found.

Further examination showed the foetal head extruding from an unusual opening to the right side of the vagina. The foetus was extracted intact. Diagnostic hysteroscopy/vaginoscopy was performed to explore the cavity beyond the orifice, and a large amount of gestational tissue was visualized. An end to the rudimentary horn cavity with a right tubal ostium was found. Attempt at removing trophoblastic tissue through the aberrant vaginal orifice was made, but incomplete.

A laparoscopic resection of the right rudimentary horn was then performed, amputating at the base. This made a right lateral colpotomy into the aberrant vaginal communication. Trophoblastic tissue half the size of the resected rudimentary horn was then removed from the cavity distal to the colpotomy. Laparoscopic inspection of this aberrant cavity confirmed clearance of all gestational tissue. The vaginal end of the aberrant communication was left patent to allow drainage and likely closure without distension from gestational tissue.

A full literature review, present medical and surgical management of uterine horn ectopic pregnancies, and the details of this particular case with a hypoplastic vagina will be discussed. Video footage of the surgery will be presented. This case demonstrates a novel anatomical anomaly with the hypoplastic vagina, and highlights the importance of combined hysteroscopy and laparoscopy in uterine horn ectopic pregnancies.

1. *Reichman D, Laufer MR, Robinson BK. Pregnancy outcomes in unicornuate uteri: a review. Fertil Steril. 2008;91:1886-94.*
2. *Edelman AB, Jensen JT, Lee DM, Nichols MD. Successful medical abortion of a pregnancy within a noncommunicating rudimentary uterine horn. Am J Obstet Gynecol. 2003 Sep;189(3):886-7.*
3. *van Esch EM, Lashley EE, Berning B, de Kroon CD. The value of hysteroscopy in the diagnostic approach to a rudimentary horn pregnancy. BMJ Case Rep. 2010 Dec 20;2010. pii: bcr0820103229. Doi: 10.1136/bcr.08.2010.3229.*

## Pleural endometriosis: an unexpected finding during thoracic surgery

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### Background

Endometriosis is a gynaecological condition affecting women of reproductive age with cyclical pelvic pain and subfertility being common presenting complaints. Though usually encountered within the pelvis, rare cases of extrapelvic endometriosis have been reported in the literature. This case report details the unexpected finding of pleural endometriosis following pleural biopsy during surgical treatment of a persistent pleural effusion.

### Case

A 38 year-old previously well woman presented to the emergency department with acute-on-chronic dyspnoea caused by a large left-sided pneumothorax and bilateral pleural effusions.

She was admitted for investigation and management after initial treatment only partially resolved her symptoms. Pleural biopsies were taken during complete decortication of the right lung by the cardiothoracic surgeons and returned an unexpected finding of endometriosis with associated pleurisy and anthracosis.

Gynaecological opinion sought after this result revealed a history of dysmenorrhoea with no sonographic cause found on previous investigation. The patient was commenced on the oral contraceptive pill with complete resolution of her symptoms.

Six months later, she returned to hospital for a diagnostic laparoscopy which showed ASRM stage IV endometriosis. She remains asymptomatic and has no immediate plans for future fertility.

### Conclusion

Pelvic endometriosis is a familiar condition encountered by gynaecologists thought to result primarily from retrograde menstruation. Extrapelvic deposits question this aetiological theory and raise the possibility of vascular or lymphatic spread in the development of these ectopic endometriotic lesions. Response to hormonal suppression in extrapelvic sites does not appear to differ compared with pelvic endometriosis and should continue to be the mainstay of treatment in affected women.

## Laparoscopic ovariopexy for the treatment of ovarian torsion in an adolescent with massive polycystic ovaries

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2. *University of Western Sydney, Campbelltown*

### Background

Polycystic ovarian syndrome (PCOS) is a multifactorial disorder that becomes apparent during adolescence with a variety of hormonal and metabolic symptoms. The cause of PCOS is unknown but studies suggest a strong genetic component that is affected by the gestational environment and lifestyle factors. Prepubertal metabolic dysfunction may be one of the first phenotypic traits observed in adolescent girls likely to develop PCOS. Polycystic ovaries are usually enlarged and are therefore at greater risk of ovarian torsion. Ovarian torsion is a rare presentation in a recently pubertal girl but it is important to establish the diagnosis early in order to preserve the affected ovary. A number of surgical techniques have been used to try to prevent retorsion with variable success.

### Case

A 14 yo girl presented to the A&E department with acute lower abdominal pain. She had a history of recurrent lower abdominal pain since the age of 7. She had been investigated by a paediatric endocrinologist and an ultrasound showed enlarged ovaries. All hormonal investigations were found to be normal. She commenced pubertal development at the age of 11 and experienced menarche at 13 years. She had a second period 3 months prior to her presentation with acute lower abdominal pain. An ultrasound showed enlarged ovaries and probably torsion of the right ovary. At laparoscopy she was found to have markedly enlarged polycystic ovaries and the right ovary was torqued twice on its pedicle. The ovary was viable and no definite cyst was seen. She had a markedly elongated right ovarian ligament and the ovary was detorted. An ovariopexy was performed by fixing the proximal end of the ovary to the uterus resulting in significant shortening of the ovarian ligament. The uterus and both fallopian tubes were normal.

### Conclusion

We will discuss a number of laparoscopic surgical techniques for the treatment of torsion involving enlarged polycystic ovaries in adolescent girls.



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