



Australasian Gynaecological
Endoscopy & Surgery
Society Limited

Vaginal and Pelvic Surgery:

*the Art
& the Controversies*

16 & 17 March 2012
Crown Conference Centre
Melbourne

AGES

Pelvic Floor
Symposium &
Workshop XIII
2012

Program & Abstracts

International Guest Speakers

Mr Boris Batke	Germany
Professor Dirk De Ridder	Belgium
A/Professor Adam Holzberg	USA
Professor N Rajamaheswari	India
Professor Shirish Sheth	India

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This meeting is a RANZCOG Approved O&G Meeting and eligible Fellows of this College will earn points as follows:

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POINTS

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16 March

9 CPD points

17 March

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Workshops - Thursday 16 March

Johnson & Johnson Medical

2 CPD points

Cadaveric Workshop

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Workshop - Sunday 18 March

American Medical Systems

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Attendance by eligible RANZCOG Members will only be acknowledged following signature of the attendance roll each day of the Conference, and for each workshop.

The RANZCOG *Clinical Risk Management Activity Reflection Worksheet* (provided in the Conference satchel) can be used by Fellows who wish to follow up on a meeting or workshop that they have attended to obtain PR&CRM points. This worksheet enables you to demonstrate that you have reflected on and reviewed your practice as a result of attending a particular workshop or meeting. It also provides you with the opportunity to outline any follow-up work undertaken and to comment on plans to re-evaluate any changes made.

Fellows of this College who attend the Meeting and complete the *Clinical Risk Management Activity Reflection Worksheet* in accordance with the instructions thereon can claim for an additional 5 PR&CRM points for the Meeting and for each of the Workshops. For further information, please contact the College.

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*the Art
& the Controversies*

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Vaginal and Pelvic Surgery:

the Art & the Controversies



Welcome

We welcome you to the **Pelvic Floor Symposium & Workshop XIII** in Melbourne. The theme of the meeting this year is *Vaginal and Pelvic Surgery – the Art and the Controversies*.

The meeting continues the tradition of providing state of the art cutting edge meetings exploring the issues arising from the management of pelvic floor dysfunction. Whilst maintaining its theme, in 2102 AGES has decided to revisit vaginal surgery and its application worldwide.

We are very fortunate to have two of the great masters of the art of vaginal surgery. Professor Shirish Sheth from Mumbai, ex FIGO president, stalwart of more than 5000 vaginal hysterectomies in his repertoire has extensively reported about his experiences with no uterine descent, previous caesareans, fibroid uteri etc. He has a multitude of pearls to offer the vaginal surgeon when the going gets tough!

Professor Rajamaheswari from Chennai has created a world renowned unit which attracts visitors internationally wishing to contribute to her work with pelvic floor disorders in challenging circumstances. These include Bob Shull, Lenaine Westney, Paul Riss and Malcolm Frazer to name a few. She has dedicated her life to serving the poor and destitute women at the Kasturba Gandhi (Gosha) Hospital. She runs the only recognised Urogynaecology training unit in India and offers her experiences with an astounding array of pelvic pathologies including fistulas.

Also joining us is Professor Dirk De Ridder, urologist from Leuven, Belgium with a large experience of female reconstructive surgery and neuromodulation. He has held positions such as President of the European Society for

Neurourology, Chairman of the Standardisation Committee for the International Continence Society, and has established an obstetric fistula service in the Congo.

From the United States we are joined by Assistant Professor Adam Holzberg, Co-Division Head for the division of Female Pelvic Medicine & Reconstructive Surgery at Cooper University Hospital, New Jersey, and Assistant Professor at Robert Wood Johnson Medical School. Assistant Professor Holzberg's special interests are urinary incontinence, pelvic organ prolapse, voiding disorders, female sexual dysfunction and genitourinary fistulas.

To cap off this impressive group, Mr Boris Batke, Associate Director Research and Development, Ethicon, is leading the Mesh and Textile Technology Platform which supports all the mesh applications including Hernia Solutions, Women's Health and Aesthetic Medicine. Mr Batke will share his considerable expertise in the field of mesh bioengineering.

With such an illustrious line-up, this meeting promises to be jam-packed with educational opportunities. During the meeting we will also spend time debating the current controversies. This is particularly pertinent with the second warning from the FDA regarding mesh kits and the obligations of clinicians.

Finally, AGES has offered a series of pre-conference workshops on Thursday 15 March and Sunday 18 March, three of which are cadaver workshops hosted by AMS, Boston and Johnson & Johnson Medical respectively. The fourth is a didactic workshop hosted by Johnson & Johnson Medical.

A very warm welcome to Melbourne. We hope you find the meeting stimulating and enjoyable.

Prof. Ajay Rane
Conference Co-Chair
AGES Director

Dr Anna Rosamilia
Conference Co-Chair
AGES Director

Dr Jim Tsaltas
AGES President

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Pelvic Floor Symposium & Workshop XIII 2012

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Day 1 Friday 16 March 2012 Crown Conference Centre Promenade Room 1&2

- 0730-0800 **Conference Registration**
- 0800-0810 Conference Opening and Welcome *J Tsaltas*
- 0810-1030 **SESSION 1**
**THE CURRENT CONTROVERSY – THE
ROLE OF MESH IN POP SURGERY**
Sponsored by Stryker
Chairs: *J Tsaltas, A Rosamilia*
- 0810-0830 **The role of mesh in vaginal POP surgery –
history and overview** *M Carey*
- 0830-0910 **The FDA, the facts** *A Holzberg*
- 0910-0930 **The clinician's perspective** *A Lam*
- 0930-0950 **FDA update on safety and effectiveness of
transvaginal placement for pelvic organ
prolapse - Australian perspective** *M Frazer*
- 0950-1005 **The insurer's perspective** *R Ayton*
- 1005-1030 **Panel and cases – discussion**
Panel: *M Carey, A Holzberg, A Lam, M Frazer,
J Tsaltas, R Ayton*
- 1030-1100 Morning Tea and Trade Exhibition
- 1100-1155 **SESSION 2**
PELVIC ANATOMY
Sponsored by Karl Storz Endoscopy
Chairs: *H Merkur, J Abbott*
- 1100-1120 **Anatomical teaching – the professor's
experience** *S Sheth*
- 1120-1140 **New anatomical concepts for pelvic
reconstruction** *D De Ridder*
- 1140-1155 **Anatomical teaching – the trainee
perspective** *J Abbott*
- 1155-1230 **KEYNOTE LECTURE**
Chair: *A Yazdani*
Vaginal hysterectomy – not a lost art
S Sheth
- 1230-1330 Lunch and Trade Exhibition
- 1330-1400 **KEYNOTE LECTURE**
Chair: *A Rosamilia*
Pelvic floor surgery – the challenges
N Rajamaheswari
- 1400-1515 **SESSION 3**
**INNOVATIONS TO AID THE VAGINAL
SURGEON**
Sponsored by Johnson & Johnson Medical
Chairs: *H McEvoy, P Dwyer*
- 1400-1420 **Innovations in energy sources** *Y N Lim*
- 1420-1440 **Innovations for haemostasis** *J Lee*
- 1440-1500 **Innovations in mesh development** *B Batke*
- 1500-1515 **Panel discussion and questions**
Panel: *B Batke, J Lee, Y N Lim*
- 1515-1545 Afternoon Tea and Trade Exhibition
- 1545-1730 **SESSION 4**
URINARY INCONTINENCE
Sponsored by Stryker
Chairs: *S Salfinger, P Maher*
- 1545-1605 **The case for the retropubic sling** *P Dwyer*
- 1605-1625 **Transobturator versus minisling** *D De Ridder*
- 1625-1645 **Occult stress incontinence – what is it and
how should we treat it?** *J Alvarez*
- 1645-1705 **An update on the role of Botulinum toxin
for bladder overactivity** *C Dowling*
- 1705-1730 **The role of neuromodulation** *D De Ridder*
- 1900 for 1930 **GALA DINNER**
Matteo's Restaurant
533 Brunswick Street, North Fitzroy, 3068
Complimentary coach transfers provided.
Please gather in the Foyer of Crown
Metropol and the Atrium Foyer entrance of
Crown Towers at 6:30pm.

Vaginal and Pelvic Surgery:

the Art & the Controversies



Day 2 Saturday 17 March 2012 Crown Conference Centre Promenade Room 1&2

- 0800-1015 **SESSION 5**
OBSTETRIC TRAUMA
Sponsored by Boston Scientific
Chairs: *A Yazdani, K Jansen*
- 0800-0815 **The reason for increasing rate of perineal trauma. Hands on or hands off?** *F Chao*
- 0815-0835 **Episiotomy** *A Rane*
- 0835-0855 **Obstetric trauma in India** *N Rajamaheswari*
- 0855-0910 **How best to repair? The evidence** *A de Souza*
- 0910-0930 **Management of Oasis-Dedicated Perineal Service** *S Al-Salihi*
- 0930-0945 **Medicolegal implications** *M McEvoy*
- 0945-1015 **Panel discussion**
Panel: *F Chao, A de Souza, S Al-Salihi, M McEvoy, N Rajamaheswari, A Rane*
- 1015-1045 Morning Tea and Trade Exhibition
- 1045-1230 **SESSION 6**
POP SURGERY: PERI-OPERATIVE CARE – MY APPROACH
Sponsored by American Medical Systems
Chairs: *A Rane, K Harrison*
- 1045-1105 **The role of pre-operative imaging** *J Lee*
- 1105-1125 **Managing blood loss during the difficult vaginal hysterectomy - tips and tricks** *S Sheth*
- 1125-1145 **Management of urinary tract injury** *D De Ridder*
- 1145-1205 **Optimal catheter management / to pack / to drain / early discharge?** *A Rosamilia*
- 1205-1230 **Panel discussion and questions**
Panel: *D De Ridder, J Lee, A Rosamilia, S Sheth*
- 1230-1330 Lunch and Trade Exhibition
- 1330-1500 **SESSION 7**
FREE COMMUNICATIONS A
Promenade Room 1 & 2
Sponsored by Olympus
Chairs: *N Rajamaheswari, A Rane*
- 1330-1350 **An International Urogynecological Association (IUGA) / International Continence Society (ICS) joint terminology and classification of the complications related to native tissue female pelvic floor surgery**
Haylen BT, Freeman RM, Lee J, Swift SE, Cosson M, Deprest J, Dwyer PL, Fatton B, Kocjancic E, Maher C, Petri E, Rizk DE, Schaer GN, Webb R
- 1350-1400 **Elevate® transvaginal mesh repair: early outcomes of over 200 procedures at care**
Patel PS, Dunkley EJC, Lam A
- 1400-1410 **Transvaginal mesh repair systems: experience with over 500 procedures at care**
Patel PS, Dunkley EJC, Lam A
- 1410-1420 **Outcomes and complications following vaginal mesh for pelvic organ prolapse surgery**
Cheong A, Avery D, Rosamilia A, Lee J
- 1420-1430 **Abdominal hysterectomy for benign disease: still an open question?**
Chow JSW, Smith CJ, Hardas G, Merkur H
- 1430-1440 **Analyses of the association of risk factor parameters with mesh exposures following perigee and apogee procedures**
Kasianandan A, Kannan K, Rane A
- 1440-1450 **Laparoscopic hysterectomy and the obese patient: a review of surgical outcomes according to body mass index**
Smith CJ, Chow JSW, Hardas G, Merkur H

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Day 2 Saturday 17 March 2012 Crown Conference Centre

- 1330-1500 **FREE COMMUNICATIONS B**
M1 & M2 Meeting Rooms
Sponsored by Karl Storz Endoscopy
Chairs: *D De Ridder, K Harrison*
- 1330-1340 **Concomitant endometrial ablation and hysteroscopic sterilisation: the latest evidence**
Lee S, Ang C, Soo S
- 1340-1350 **A prospective study on obstetric levator trauma and women's perception of pelvic floor integrity and sexual function**
Yusuf S, Thibault-Gagnon S, Dietz HP
- 1350-1400 **Combined laparoscopic and cystoscopic excision of deep infiltrating endometriosis involving bladder**
Chao F, Rosamilia A
- 1400-1410 **Outcomes of Monarc™ versus MiniArc™ slings in patients with Intrinsic sphincter deficiency**
Iyer J, Kasianandan N, Delpachitra S, Pujar T, Randhawa B, Rane A
- 1410-1420 **Biological extracellular matrix grafts (Surgisis) for the treatment of mesh exposure and vaginal stenosis**
Ghosh B, Parker J, Cario G
- 1420-1430 **Prevalence of pelvic organ prolapse and correlation of symptoms with prolapse severity and location in patients attending Urogynaecology clinic, Siriraj Hospital**
Kezang, Leerasiri P, Hengrasmee P
- 1430-1440 **Prolapse and sexual matters symptoms after surgery for pelvic organ prolapse (POP)**
Ulrich D, Dwyer P, Rosamilia A, Lim Y, Lee J
- 1440-1450 **MiniArc and Monarc suburethral sling in women with stress urinary incontinence – a randomised controlled trial**
Lee J, Rosamilia A, Dwyer P, Lim Y
- 1330-1500 **FREE COMMUNICATIONS C**
M5 & M6 Meeting Rooms
Chairs: *S Sheth, M McEvoy*
Sponsored by Stryker
- 1330-1340 **A rare anatomical variation of the femoral nerve: a report of a case**
Arachchi A, Vasudevan HA
- 1340-1350 **Problems with the Boerma anterior gastropexy for giant high risk Para esophageal hernias**
Arachchi A, Kohn G
- 1350-1400 **Vaginal hysterectomy – how easy**
Hamdorf G
- 1400-1410 **Dual (uterosacral and sacrospinous ligaments) vaginal vault support at colporrhaphy - an anatomical basis for a four-part vaginal repair**
Haylen B, Vu D, Birrell W, Vashevnik S, Tse K
- 1410-1420 **The retroverted uterus: a history and pelvic floor oriented perspective**
Haylen B, Vandeville B
- 1420-1430 **Is total hysterectomy at the time of laparoscopic mesh sacral promontofixation a risk factor for mesh erosion?**
Patel PS, Lam A
- 1430-1440 **Laparoscopic mesh sacrocolpopexy for recurrent neovaginal prolapse after male-to-female gender reassignment**
Patel PS, Lam A
- 1500-1530 Afternoon Tea and Trade Exhibition
- 1530-1730 **SESSION 8**
INTERACTIVE SESSION – TRIALS AND CHALLENGES OF SACRAL COLPOPEXY
Promenade Room 1&2
Sponsored by Stryker
Chairs: *A Lam, R O'Shea*
- 1530-1545 **The facts**
R O'Shea
- 1545-1600 **The RANZCOG perspective**
R Sherwood
- 1600-1615 **Adhesiolysis**
A Yazdani
- 1615-1630 **Management of bowel injury**
R Woods
- 1630-1645 **AGES perspective**
A Lam
- 1645-1715 **Panel discussion and questions**
Panel: *A Lam, R O'Shea, R Sherwood, J Tsaltas, R Woods, A Yazdani*
- 1715-1730 **Award and close**
J Tsaltas

Vaginal and Pelvic Surgery:

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Program Abstracts

FRIDAY 16 MARCH

SESSION 1 / 0830-0910

THE FDA: THE FACTS

Holzberg AS

OBJECTIVE: The objective of this presentation is to explain the U.S. Food and Drug Administration's (FDA) Public Health Notice (PHN) on transvaginal mesh and explain their recommendations to physicians and patients. In addition we will speak of the many criticisms physicians have had regarding this statement and discuss transvaginal mesh's need in our treatment algorithm. We will compare the use of transvaginal mesh as treatment for pelvic organ prolapse to the gold standard abdominal sacrocolpopexy. We will also discuss this information in regards to how we can properly counsel patients in their use.

METHODS: The FDA public health notice was extensively reviewed and many prominent surgeons in the U.S have questioned its conclusions. This presentation discusses some of those concerns.

RESULTS: In July 2011 the FDA released a safety communication entitled "Update on Serious Complications Associated with Transvaginal Mesh for Pelvic Organ Prolapse." It was stated that complications related to placement of transvaginal mesh is not rare and it was not clear as to whether these repairs are more effective than nonmesh repairs. Since the publication the FDA has asked the industry marketing transvaginal mesh "kits" to produce research to support their use. The use of abdominal mesh for treatment of prolapse was not required to produce additional data and was ultimately not questioned by the FDA. In addition the use of transobturator and retropubic slings have been deemed safe and no further data is required. On the other hand it has been requested by the FDA that additional research be done to show the safety and efficacy of single incision slings.

CONCLUSION: The FDA PHN has sparked intense debate in the U.S. regarding the use of transvaginal mesh for the treatment of pelvic organ prolapse. This presentation explains some of the support for its use. It also reviews some of the good that will come out of this notice, most importantly further data to support its use and the need for proper patient counseling.

SUGGESTED READING:

- <http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm262435.htm>
- <http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/ImplantsandProsthetics/UroGynSurgicalMesh/default.htm>
- <http://www.fda.gov/AdvisoryCommittees/CommitteesMeetingMaterials/MedicalDevices/MedicalDevicesAdvisoryCommittee/ObstetricsandGynecologyDevices/ucm262488.htm>
- <http://www.fda.gov/downloads/MedicalDevices/Safety/AlertsandNotices/UCM262760.pdf>
- Miles Murphy, Adam Holzberg, Heather van Raalte, Neeraj Kohli, Howard B. Goldman, Vincent Lucente & on behalf of the Pelvic Surgeons Network :Time to rethink: an evidence-based response from pelvic surgeons to the FDA Safety Communication: "UPDATE on Serious Complications Associated with Transvaginal Placement of Surgical Mesh for Pelvic Organ Prolapse" International Urogynecology Journal Volume 23, Number 1, 5-9, DOI: 10.1007/s00192-011-1581-2

AUTHOR AFFILIATION: Assistant Professor Adam S. Holzberg, D.O.; Cooper University Hospital, Camden, New Jersey, United States of America.

SESSION 1 / 0910-0930

THE CLINICIAN'S PERSPECTIVE

Lam A

Despite almost a decade of experience and research, pundits remain diametrically opposed about the indications, safety and efficacy of mesh in pelvic organ prolapse surgery. While the role of intra-abdominal mesh is fairly established for management of vault prolapse, the place of transvaginally implanted mesh remains controversial due to questionable benefits, adverse events and serious complications.

The many conflicting perspectives about the role of mesh in POP mean we are practicing in a highly complex medico-legal environment. Consequently, every clinician should have a systematic approach to individualise the decision of whether to use mesh in POP surgery.

Program Abstracts **FRIDAY 16 MARCH**

The following is a recommended approach:

- Determine clearly the nature of the patient's presenting complaints
- Define clearly the patient's aims of seeking management for POP
- After appropriate evaluation, take time to ensure that patient is well informed of the nature of her POP
- Discuss with the patient the available treatment options (wait-see, pessary, physiotherapy, surgery)
- Explain clearly why certain treatment modality is recommended
- If surgery is considered, alert patient that POP surgery may improve or restore but may also at times worsen vaginal anatomy, bowel/bladder/sexual functions
- Inform patient that no surgery is risk free
- Inform patient that failure or recurrence is a possible outcome
- Communicate clearly so patient is able to understand which and why certain outcomes can or cannot be achieved
- Explain the differences between native tissue and mesh repairs
- Explain the reasoning behind mesh implantation
- Analyse the benefits and risks of mesh implantation
- Inform patient of your own experience and results
- How do your own experience and results against published data?
- When in doubt, advise patient to take more time before making a decision regarding management
- If patient is still uncertain with any aspect of management, recommend patient seek second opinion.
- Choose the treatment that will most likely meet patient's expectations
- Invite patient to come back for periodic surveillance or to report any adverse events after POP surgery especially after mesh implantation
- Maintain a data base to analyse outcomes, including adverse events and complications
- Compare outcomes against other surgeons / centres / published data
- Participate in mesh registry (if available)
- Modify surgical practice or choice of repair materials as per self-audit results
- Keep track, review, inform patient of changes in surgical practice

The author has adopted this systematic approach in presenting an open and honest perspective with regard to the role of mesh in POP surgery to help patient take an active role in the management of POP.

REFERENCES:

1. Rogers R. To mesh or not to mesh. *Obstet Gynecology* 2011
2. FDA Safety Communication: UPDATE on Serious Complications Associated with Transvaginal Placement of Surgical Mesh for Pelvic Organ Prolapse. July 13, 2011

3. Joint AUGS and ACOG Joint Committee Opinion on Vaginal Placement of Synthetic Mesh for POP Recommendations - November 21, 2011

AUTHOR AFFILIATION: Associate Professor Alan Lam; Centre for Advanced Reproductive Endosurgery (CARE), St Leonards, NSW, Australia.

SESSION 1 / 0930-0950

FDA UPDATE ON SAFETY AND EFFECTIVENESS OF TRANSVAGINAL PLACEMENT FOR PELVIC ORGAN PROLAPSE

Frazer M

There is growing disquiet regarding the use of vaginal mesh to treat pelvic floor prolapse and there is a growing polarisation between those who feel mesh is useful and those who either do not concede it is ever necessary; or even if they concede it may be useful, consider its risks are simply too great. Both camps are beginning to set up entrenched positions. There seems to be a general feeling that the variations that are reported in the world literature regarding vaginal mesh outcomes may be due at least to some extent to variations in surgical skill levels rather than necessarily inherent in the use of mesh itself.

There is a general consensus around the world that the current ad hoc training, arranged either personally between practitioners or by well-meaning industry is unacceptable and, more importantly, likely to be totally indefensible in an increasingly litigious environment.

WHAT UGSA AND RANZCOG ARE TRYING TO DO

- protect surgeons against any accusations of the careless introduction and use of new mesh techniques
- provide hospital credentialing authorities with a rational basis for their decisions to credential practitioners in the various procedures (and not just rely on the practitioners' own assessment of skill level)
- Provide industry with evidence-based training program guidelines for the use of their products
- Protect patients against inappropriate use of mesh by providing surgeons with clear evidence-based guidelines for mesh use wherever possible
- Provide surgeons with a both a peer group to disseminate ideas and an effective surgical database where surgical outcomes can be continuously monitored
- Eventually develop specific and detailed patient information leaflets which will assist in preoperative counselling



the Art Vaginal and Pelvic Surgery: *& the Controversies*

Program Abstracts **FRIDAY 16 MARCH**

The Urogynaecological Society of Australasia (UGSA) in conjunction with RANZCOG) welcomes any credible scientific information on the management of pelvic floor repair that may result in more effective and safer treatments for women with this common and often disabling condition. The recent American FDA report on Urogynecological Surgical Mesh is a valuable contribution to the debate.

None of the complications and risks cited in the FDA report are new and UGSA and RANZCOG would point out that the FDA document emphasises a number of limitations in the information available in the current literature – meaning that firm conclusions may not be able to be drawn in our current incomplete state of knowledge. UGSA and RANZCOG, over the past two years have taken steps to set up a regional database (including New Zealand) for pelvic floor surgery that will hopefully fill in some of the gaps in our current knowledge.

UGSA and RANZCOG strongly support the FDA recommendations for patients to engage in a dialogue with the treating surgeon regarding the use of mesh and be fully informed regarding the potential benefits and hazards of such surgery. Australia has been and remains on the forefront of research into these surgical technologies with many innovations arising from these shores. Australia also has been one of the most regulated industries for mesh usage in gynaecology under the Auspices of the UPCAG and the PDC. The RANZCOG has the oldest formal training program in the world devoted to the management of pelvic organ prolapse, ensuring a well-informed and highly skilled workforce of subspecialists in this area for the last two decades. In the view of RANZCOG and UGSA the incidence of complications when using artificial mesh in prolapse surgery is likely to be related to surgical expertise, training and work volume. The most important fact remains that surgeons who use mesh infrequently in improperly selected cases will get higher rates of complications.

AUTHOR AFFILIATION: Associate Professor Malcolm Frazer, Chairman of the urogynaecology subspecialty committee of RANZCOG and Vice Chair of the Urogynaecological Association of Australasia.

SESSION 1 / 0950-1005

THE INSURER'S PERSPECTIVE

Ayton R

There are about 16,700 vaginal repair operations per year in Australia as reported by the Australian Institute of Health and Welfare¹. Medicare Item numbers do not distinguish between cases with or without the use of mesh.

Experience from the data base of Avant, Australia's largest provider of medical indemnity insurance, will be presented regarding civil claims, complaints to disciplinary bodies and Coronial matters between 01/01/200 and 31/01/2011, both where then use of allograft mesh prostheses contributed to the matter and where mesh was not utilized. The cost of these matters will be reviewed within the context of the total cost of obstetric and gynaecological litigation to Avant.

REFERENCE:

Australian Institute of Health and Welfare, Separation statistics by principal diagnosis in ICD-10-AM, Australia, 1998-99 to 2006-07 and 2008-09 to 2009-10. Accessed at <http://www.aihw.gov.au/principal-diagnosis-data-cubes/>

CONFLICT OF INTEREST: Director, Avant Mutual Board. No affiliation with any producer of medical prostheses or pharmaceutical products.

AUTHOR AFFILIATION: Dr Rosemary Ayton, Director, Avant Mutual Board. Gynaecologist; Royal Women's Hospital Melbourne & private practice

SESSION 2 / 1100-1120

ANATOMICAL TEACHING – THE PROFESSOR'S EXPERIENCE

Sheth SS

'Man learns as he lives and experience is the greatest teacher in the world'

S. Vivekananda

Knowledge and its timely application particularly of human anatomy, at the opportune time can avoid a disaster or even save a life during surgery. The Following are a few examples which the author has learnt after suffering and undergoing through mishaps and utilized in Gyn practice.

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1. The surgeon of tomorrow will be frequently confronted with women needing hysterectomy with history of one or more caesareans. To smoothen a hysterectomy via the vaginal route it is vital to get an access to the vesico uterine peritoneum for which an anatomy based, specific space – laterally, the utero-cervical broad ligament space is recognized and presented. MRI studies and experience has proved the worth of this anatomical landmark. The same space is utilized by laparoscopic surgeons in their patients for bladder separation and utilized for bladder separation by Gynecologists at abdominal hysterectomy - both in women with history of caesarean section(s) in past.
2. Caesarean section(s) can uncommonly leave behind adhesions, usually dense, which distort the normal anatomy and complicate surgery. Clinical as well as sonographic signs to pre-operatively diagnose such specific adhesions, is presented.
3. The Posterior utero-cervical broad ligament space is of immense value while separating adhesions from the posterior uterine wall during vaginal hysterectomy in women with ovarian endometrioma of less than 5 cms. A Retroverted, retroflexed uterus gives sufficient space at the utero-cervical junction and is the target to achieve. This will facilitate adhesiolysis and permit VH with concomitant salpingo-oophorectomy.
4. For concomitant salpingo-oophorectomy at vaginal hysterectomy, it is vital to get a safe access to the infundibulopelvic ligament. Anatomically, at first, the round ligament must be identified and carefully cut separately and as laterally as possible. This will pave the way for surgery using the ovarian clamp and anatomically keeping the ureter safe.
5. Broad ligament fibroid: Anatomy, when carefully studied and respected, shows that the infundibulopelvic ligament has to be lateral to the broad ligament and if so, a fibroid in broad ligament has to be medial to the infundibulopelvic ligament. The Vaginal surgeon who performs concomitant salpingo-oophorectomy at VH by reaching the infundibulopelvic ligament can therefore, easily access a broad ligament fibroid and perform concomitant removal of broad ligament fibroid at vaginal hysterectomy and spare the woman from greater invasion later. Indeed, so much can be achieved with good knowledge of anatomy.

AUTHOR AFFILIATION: Professor Dr Shirish S. Sheth; Mumbai, India.

SESSION 2 / 1120-1140

NEW ANATOMICAL CONCEPTS FOR PELVIC FLOOR RECONSTRUCTION

De Ridder D

Although anatomy does not have a tendency to change a lot over the years, the scientific insight on how the female pelvic floor is constructed keeps evolving.

The introduction of mesh augmented repairs of pelvic floor defects has renewed the interest in anatomical landmarks such as the obturator muscle, sacraospinous ligament and the ischial spine.

The importance of these landmarks will be explained during this lecture and their relationship to outcome of pelvic floor reconstruction will be discussed.

AUTHOR AFFILIATION: Professor Dirk De Ridder MD, PhD, FEBU; Dept. Of Urology KU Leuven, Belgium.

SESSION 2 / 1140-1155

ANATOMICAL TEACHING – THE TRAINEE PERSPECTIVE

Nesbitt-Hawes E, Sgroi J, Abbott J

Learning anatomy requires a combination of appropriate teaching materials at the appropriate time. Studies to date demonstrate that anatomy learning during undergraduate years is dependent on University location, facilities, student motivation and the assessment requirements for this subject. Cadaveric dissection has been demonstrated to greatly assist learning, but is expensive, time consuming to supervise and the quality of dissections is poor – particularly when these do not contribute to a mark in anatomy learning. With a greater reliance on imaging prior to any surgical procedure, the capacity to learn and retain anatomy from imaging has become an increasing component of anatomy teaching. Banks of images are cheaper to store and computer access allows access to computer driven tutorials. This is a more realistic option for the increasing number of medical students and trainees through Australian Universities and teaching hospitals.

The time to learn anatomy is a further aspect of training as the necessity to learn detailed anatomy not relevant to the specialty practice area of the individual has been called into question. For surgeons, having knowledge of anatomy



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prior to undertaking a procedure, any procedure, would seem a mandatory requirement for a doctor as opposed to a technician. Since surgery will present a variety of complications as well as anatomic variations, the foundation of anatomy must continue to be taught and learned in a variety of forms and in a systematic manner:

1. Foundations – ‘text-book’ anatomy – can be translated to cadaveric specimens
2. Imaging anatomy – how the anatomy of the pelvis/ abdomen appears on imaging modalities
3. Surgical anatomy – anatomy as seen when assisting surgical procedures
4. Surgeon’s anatomy – what you see when you are operating
5. Complications and anatomic variations
6. Teaching anatomy

The RANZCOG training program has an anatomy and embryology FLP as a foundation for anatomy training. We will present the results of a trainee survey on their experience of anatomy training and the usefulness and approach to their learning of anatomy as it relates to obstetrics and gynaecology.

AUTHOR AFFILIATION: Dr Erin Nesbitt-Hawes, Dr Joseph Sgroi, Associate Professor Jason Abbott; University of New South Wales, Sydney, New South Wales, Australia.

KEYNOTE LECTURE / 1155-1230

VAGINAL HYSTERECTOMY – NOT A LOST ART

Sheth SS

‘Medicine is both an art and a science. Let us learn what we can of the science, and practice what we can of the art.’

Hysterectomy via the vaginal route (VH) is a surgical art and it is no surprise that surgery through the natural orifice is being heavily publicized. From the time of Doyen till the latest evidence - based literature, all of them emphatically put vaginal hysterectomy as the choice of hysterectomy in the interest of patients.

The Institute for Health and Clinical Excellence guidelines, RCOG 2011, states that the only real indication for total abdominal hysterectomy is where the uterine size is greater than about 18 weeks of pregnancy. It further states that in the UK, 67% of hysterectomies are still being carried out by open surgery and women are not being offered the full range of available treatments and are being ‘short changed’. This has invited introspection globally.

Chronic evaders often come up with chronic excuses and cannot appreciate the surgical art. Excuses are demystified by emphasizing repeatedly that, VH for uterine fibroids and in nullipara and salpingo-oophorectomy at VH strongly indicate the usefulness of the vaginal route.

When not contraindicated, ideally VH should replace all the abdominal and laparoscopic hysterectomies performed for uteri less than 12 to 14 weeks size or uterine volume less than 250 to 350 cm³. Laparoscopic hysterectomy / LAVH should be reserved only for crystal clear indications when the vaginal cannot be performed or is unsafe and abdominal hysterectomy should be resorted to only when vaginal and laparoscopic are contraindicated or unsafe.

Knowing the value of the art of vaginal hysterectomy, Dunn et al in Ohio, USA and Olah and Khalil in Warwick England 2008 have put in specific efforts to convert abdominal and laparoscopic hysterectomy into vaginal hysterectomy. I am sure they must have assessed the subtleties of patient’s anatomy well.

Editorial comments from Prof. H. Jones reflect the art: ‘We must continue to train gynecologists to be able to do vaginal surgery. Let the public know that newer laparoscopic techniques and equipment offer no advantage over proven vaginal hysterectomy techniques’. He writes later ‘Encourage to increase VH because of low morbidity, rapid post-operative recovery and cost savings’.

One needs to remember that 70-80% women need the least invasive vaginal hysterectomy and not it’s alternatives and 80% of the world is without laparoscopes and/or laparoscopists. For those who want to practice and assist the interest of patients, the vaginal approach –through the natural orifice, is not only an Art but a proven science giving tremendous benefits. Indeed, it is the vaginal route that differentiates Gynecologists from other surgeons and therefore we need to apply and flourish the said art in the best interest of our patients and gradually take away words ‘NOT LOST’ from this art.

AUTHOR AFFILIATION: Professor Dr Shirish S. Sheth; Mumbai, India.

KEYNOTE LECTURE / 1330-1400

PELVIC FLOOR SURGERY – THE CHALLENGES

Rajamaheswari N

Emergence of newer concepts on supports of pelvic organs and better understanding of the anatomy of the pelvic floor

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has enhanced our knowledge about pelvic floor surgeries. Challenges are inevitable with pelvic floor surgeries due to restricted working space, view and access. Coexisting pelvic pathological conditions (like endometriosis, PID, tumors, adhesions from previous surgeries) worsen it further and increase the chances of injury to neighboring pelvic structures.

SURGERY FOR POP

Surgery for primary and recurrent POP entails numerous challenges which may be surgical selection oriented, technique related or decision linked.

Synthetic mesh based repair is becoming more popular for POP particularly for recurrent POP to minimize failures.¹

Ensuring successful outcome with no future recurrence or complications is unquestionably a challenge.

- Ever growing surgical dilemma include
- Surgical route of approach - vaginal vs. abdominal / laparoscopic^{2,3}
- optimal trans vaginal technique for apical support⁴
- native tissue vs. mesh based techniques to repair of anterior, posterior and middle compartment defects⁵
- Role of hysterectomy during repair of POP
- concomitant Hysterectomy & mesh augmentation⁵
- optimal procedure for repair of post hysterectomy POP⁶
- optimal technique for repair of recurrence after primary mesh repair in any compartment⁷
- optimal management of SUI at the time prolapse repair (irrespective of technique)⁸

4th international consultation (ICUD) analyzed all available evidences in regard to surgical management of POP and furnished recommendations to overcome some of the challenges.⁹

MESH BASED REPAIR

Meshes and minimally invasive kits have been designed and are used to recreate the suspension at the apex, anterior and posterior compartments.

There is significant uncertainty about safety and efficacy of secondary prolapse procedures for prolapse recurrence following a primary mesh procedure.

There are concerns regarding the status of normal dissection planes, following a uterine conserving mesh based procedure. Given the high success rates of sacrocolpopexy in women with recurrent prolapse, the risk benefit ratio of routine mesh placement for primary prolapse procedures needs further evaluation.¹⁰

Appropriate counseling of patient must include the known

serious risks of mesh placement and the uncertainty of long-term functional outcomes.

Future research should scrutinize

- safety and efficacy of prolapse repair with meshes that include arms that traverse non vaginal spaces
- management mesh complications like contracture and complications associated with armed meshes
- management of recurrent anterior compartmental prolapse following unsuccessful permanent mesh

4th international consultation (ICUD) has furnished the following facts regarding mesh based repair.

Sacrocolpopexy using synthetic material is recommended for apical suspension (grade A) Usage of mesh based repair with concomitant hysterectomy needs to be avoided as it enhances the mesh related complications (grade B).¹¹

Repair of anterior vaginal wall prolapse with polypropylene mesh is superior (1yr) - grade A¹²

When concomitant Hysterectomy and anterior repair is required, it is preferable to avoid synthetic augmenting material (grade B).

No recommendation for trans vaginal mesh placement following intra operative cystotomy (grade D) Trans vaginal repair of posterior wall without mesh is preferred (grade B).¹¹

During POP repair, trans vaginal mesh placement after intra operative proctotomy needs to be discouraged (grade C).

CONCLUSION: Though surgeries are tailor made to suit the patient, it is essential to follow the principles of the pelvic surgery. Evidence based surgical alternatives should be offered to all Women planning prolapse surgery. The safety and feasibility of re operation in the event of recurrence should be considered when performing primary repair. Identifying co-existing dysfunctions and addressing the pelvic floor as a complete entity will enable us to achieve the goals of reconstructive pelvic floor surgery.

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CONFLICT OF INTEREST: none

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& Reconstructive Pelvic Surgery Society of India (URPSSI) Institute of Social Obstetrics & Govt Kasthubha Gandhi Hospital, Madras Medical College, Chennai, Tamil nadu, India 600005.

SESSION 3 / 1420-1440

INNOVATIONS IN HAEMOSTASIS

Lee J

Achieving haemostasis remains an ever present challenge in the operating rooms. It is important to be prepared and not forget adequate history (e.g. off label medication usage), adequate pre-operative planning (adequate incision, retraction, anaesthesia). Basic principles should be followed, including adequate exposure and lighting to search and control arterial / venous bleeding sources.

Hemostatic agents that had been in use include porcine gelatine, oxidised regenerated cellulose and microfibrillar collagen. Porcine (e.g. Gelfoam) has no intrinsic hemostatic actions. They absorb 45 times their weight in blood and provide a scaffold for platelets to initiate contact, thereby initiating release of intrinsic extrinsic clotting mechanism. Oxidised Regenerated Cellulose (Surgicel) achieved hemostasis via denaturation of blood proteins, mechanical activation of clotting cascade and local vasoconstriction. Its low pH is also bactericidal against many pathogens. Microfibrillar collagen, in various forms as powder, sheets or sponge, provides binding sites for platelets, which degranulate, releasing coagulation factors and initiating clotting cascade.

The increasing trend in uptake of bioadhesives, tissue sealants and hemostatic agents may have been related to a parallel increase in minimally invasive surgery and increasingly complex reconstructive surgeries.

Fibrin Sealants consists of fibrinogen and thrombin which comes from donor plasma. The supraphysiologic concentrations of fibrinogen in these concentrations facilitate rapid and predictable clot formation. The two components are delivered in a dual chambered delivery system. Donor plasma attracts the risk of viral transmission and this has led to developments that use autologous blood to derive thrombin and fibrinogen. In addition to hemostasis, fibrin sealant can induce fibroblast cellular migration, growth factor induction and accelerating revascularization making them ideal for urinary tract sealant.

Thrombin preparations (without fibrinogen) acts through enzymatic cleavage of fibrinogen to fibrin to create an

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insoluble clot which platelets can adhere. It can be sourced from bovine, human pooled plasma and recombinant. Bovine derived products have significant disadvantages as it can induce allergic reactions, especially when used repeatedly in a single patient. Antibodies following exposure can also cross react with human clotting factors to induce severe coagulopathy. Although thrombin is effective in hemostasis when blood is present, most preparations also have an absorbable gelatine matrix. This matrix could swell to conform to shape of wound, providing a tamponade effect and also a scaffold for the resulting fibrin polymer.

A thorough knowledge of safety, efficacy, cost and biologic properties of hemostatic agents could help gynaecologist select the best product – however individual operating experience remains a critical factor in determining successful outcomes.

AUTHOR AFFILIATION: Dr Joseph Lee; Monash Medical Centre, Moorabbin, Mercy Hospital for Women, Heidelberg, Victoria, Australia.

SESSION 3 / 1440-1500

INNOVATION IN MESH DEVELOPMENT

Batke B

Surgeons have the desire to use the best available products for their patients to ensure superior outcomes.

Synthetic meshes have been used in hernia repair since the 1950's and have been used in pelvic floor repair over the last decade. Tremendous collaboration between surgeons and companies improved clinical results with a special focus on patient comfort. A big step toward that direction was the introduction of macroporous meshes in the 90's that were later used in pelvic floor repair after a history of success in hernia repair. Those meshes have a macroporous construction and absorbable fibers to support the handling during the various procedures. By design, these mesh constrictions mimic soft tissue properties which increases the quality of life of the patients that have to undergo surgical procedures.

Since initial introduction of the macroporous meshes, substantial preclinical and clinical evidence has been created and published. Data clearly indicates the superior outcomes of the macroporous meshes compared to the prior invented meshes.

One of the latest products leveraging the macroporous and partially absorbable technology is PROLIFT +M. After running a three year clinical study, we are able to show favorable results and are convinced that these meshes are improving patients' lives!

AUTHOR AFFILIATION: Mr Boris Batke; Johnson and Johnson Medical GmbH, 22851 Norderstedt, Germany.

SESSION 4 / 1545-1605

THE CASE FOR THE RETROPUBIC SLING

Dwyer P

Tension-free vaginal tape has rapidly gained worldwide acceptance since the late 1990's due to low morbidity, decreased hospitalization, and equivalent success when compared to more traditional operations. Ward and Hilton reported the first randomized controlled trial comparing the TVT and the Burch colposuspension. Similar objective cure rates were reported at 2 years at the 5 year follow-up. The success and popularity of TVT has perhaps itself led to the introduction of "look-alike" slings with multiple modifications purported to appeal to a wide range of pelvic surgeons. However, the choice of surgery will vary according to the clinical situation and no one operation will suit all patients. For example, if infection is present, synthetic slings would be best avoided; or women having abdominal surgery for another indication may be better suited to a colposuspension or fascial sling.

Other major modifications were the transobturator tapes and the mini-slings. The transobturator tapes are now performed more frequently than the retropubic slings. Transobturator midurethral tapes were introduced to minimize the complications of the retropubic slings, which include injury to the bladder, major vessels, and bowel. Transobturator midurethral tape has shown similar safety and efficacy to TVT in recently published randomized trial, meta-analyses, and in retrospective series. However these studies look at short term results of 1-2 years duration and longer term studies are needed to confirm these results. Certainly there is evidence that the retropubic sling is superior in women with ISD and who have failed previous SI surgery.

Therefore until there is good evidence that shows that a new sling is safer and more effective than a retropubic mid urethral sling we should not be induced to change.

AUTHOR AFFILIATION: Professor Peter Dwyer; Mercy Hospital for Women, Melbourne, Victoria, Australia.



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SESSION 4 / 1605-1625

TRANSOBTURATOR VERSUS MINISLING

De Ridder D

The transobturator slings have proven to be excellent alternatives to retropubic slings in many scientific publications and systematic reviews. Will minislings go the same way?

Different types of minislings exist and the efficacy data are quite variable in the literature.

The most recent data on minislings will be presented as well as some of the possible advantages and disadvantages of these types of slings in the daily practice.

AUTHOR AFFILIATION: Professor Dirk De Ridder MD, PhD, FEBU; Dept. Of Urology KU Leuven, Belgium.

SESSION 4 / 1645-1705

AN UPDATE ON THE ROLE OF BOTULINUM TOXIN FOR BLADDER OVERACTIVITY

Dowling C

Botulinum Toxin A (BonTA) produces a reversible chemical denervation in smooth and striated muscle. Its use in Neurogenic Detrusor Overactivity (NDO) is well established and has recently gained FDA approval. BonTA has been used in the management of refractory idiopathic detrusor overactivity (IDO) since first publication in 2004¹. It has become an important part of the therapeutic armamentarium in patients with refractory IDO.

The basic technique of injection is relatively simple and can be performed under local anaesthetic. Studies demonstrate improvements in both quality of life scores and urodynamic parameters of importance². The key adverse event is the development of an elevated post void residual and the possible need for intermittent self-catheterisation.

Controversies remain as to the optimal dosing, site and depth of injection and the number of different commercial preparations available make the subtleties of the use of BonTA important in improving outcomes and reducing side effects for patients. There are also unanswered questions around the safety and efficacy with long term use and the use in patients without DO on urodynamics. A discussion of these topics, appropriate case selection and technical aspects of injection will be presented.

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SESSION 4 / 1705-1730

THE ROLE OF NEUROMODULATION

De Ridder D

Neuromodulation of the sacral nerves (SNS) was introduced in 1995. Since then the acceptance of this treatment modality for chronic refractory bladder filling and emptying problems has been rather low. Nevertheless SNS has an excellent track record of offering patients a long-term solution for these chronic problems, that cannot be solved easily by other means. The indications will be discussed extensively as well as the technical issues. Not only OAB, but also other indications such as bladder emptying problems will be illustrated. The positioning of this treatment modality against the use of botulinum toxin in the treatment of OAB will be discussed.

AUTHOR AFFILIATION: Professor Dirk De Ridder MD, PhD, FEBU; Dept. Of Urology KU Leuven, Belgium.

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SESSION 5 / 0800-0815

THE REASON FOR INCREASING RATE OF PERINEAL TRAUMA: HANDS ON OR HANDS OFF?

Chao F

3rd and 4th degree perineal trauma aka obstetric anal sphincter injury (OASI) is a well-known complication of vaginal delivery with potentially serious long-term consequences and implications for a woman's health. Known risk factors for OASI include fetal macrosomia with birth weight of over 4kg, POP position, nulliparity, induction of labour, epidural analgesia, prolonged 2nd stage, shoulder dystocia, midline episiotomy and forceps delivery.

The risk of OASI is often quoted as 1% of all vaginal deliveries. However, many studies have reported an increased incidence of OASI over the last 3 decades. This is in spite of minimal population changes that could alter some of the above mentioned risk factors. The decreasing use of episiotomy and forceps delivery and the rising rates of Caesarean deliveries have not contributed to decreasing the rate of OASI. So why are the rates of OASI increasing? Is it because we are more aware of the problem, identify them more often and hence increase the reported rates? Perhaps the decreasing use of episiotomy has gone too far below the ideal 20-30% rate leading to a rebound increase in the OASI rates. Could it be that mediolateral episiotomy is actually protective for OASI and the past literature findings are due to not distinguishing between midline and mediolateral episiotomy? There is data to suggest that the wider the angle to the episiotomy, the lesser the risk of OASI. There is also data to suggest that only 22% of episiotomies are truly mediolateral.

There has also been a deviation from traditional perineal management methods ('hands on') in midwifery practice towards a 'hands off' approach of delivery. The reason for this change is unclear as evidence for its benefit is sparse. Trochez et al 2011 found that almost 50% of midwives today prefer the 'hands off' method of delivery and this preferred method is inversely proportional to the years of experience of the midwife ie. more midwives with less than 5 years experience prefer 'hands off' while more midwives with more than 5 years experience prefer the 'hands on' method.

The NICE guidelines 2007 states that either 'hands on' or 'hands off' approach for perineal protection are appropriate. But what is the evidence regarding perineal protection?

Laine et al 2008 found that instituting and teaching 4 techniques of perineal protection decreased OASI rates from

4% -1% in Norway over a 5 year period. The 4 techniques instituted included:

- Keeping a hand on the fetal head
- Instructing mother not to push during crowning
- Guiding the baby's head through the introitus by gripping the baby's chin with the flexed middle finger of the other hand
- Encouraging the mother to deliver in a position where the perineum can be observed and the above maneuvers performed

Parnell et al 2000 found in a case control study that easing the perineum decreased OASI.

An ecological study conducted in the 4 Nordic countries found that the OASI rates are significantly higher in Sweden, Denmark and Norway compared to Finland in spite of higher episiotomy and instrumental delivery rates in Finland. The only difference in obstetric practice found between Finland and the other 3 countries are perineal protection techniques and delivery positions. Finland practiced more traditional delivery methods ('hands on') compared to the other 3 countries.

The literature regarding perineal protection at delivery remains sparse. It is important that we investigate why the rates of OASI is rising and scrutinize our current obstetric practices using evidence based medicine.

AUTHOR AFFILIATION: Dr Fay Chao, Urogynaecologist; Southern Health, Melbourne, Victoria, Australia.

SESSION 5 / 0815-0835

EPISIOTOMY

Rane A

Episiotomy is one of the commonest surgeries performed on women in their reproductive age. Recently this procedure has come under both scientific and emotional scrutiny. Emotional aspects of it include a perception of unnecessary intervention, genital injury or in some cases bodily harm. Scientific aspects have included a Cochrane review in 2003-2004, but more recently some extensive research from Scandinavia looking at perineal trauma rates, birthing practises and urogynaecological sequelae.

Is an intact perineum really INTACT? Why has an intact perineum become an indicator of good obstetric care in some institutions? What is the evidence? This lecture explores the history of episiotomy, discusses liberal versus restricted versus individualised episiotomy, when to give it, how to give it and perhaps most importantly WHY to give it.

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SESSION 5 / 0835-0855

OBSTETRIC TRAUMA IN INDIA

Rajamaheswari N

Obstetric trauma is rampant in India and contributes significantly to maternal morbidity and mortality imposing tremendous challenge on health care delivery. Lack of knowledge about the need for Institutional delivery, non availability of adequate number of skilled birth attendants, limited access to Hospitals, poor transport facility, delayed referrals and low doctor patient ratio are well known causes.^{1&2} Moreover over growing population and high birth rate has increased the burden.

Child birth can damage pelvic organs and pelvic floor. As a consequence, genital, urinary and gastro intestinal tract can get traumatized.

Obstetric trauma like rupture uterus, cervical tear, colporrhexis or avulsion injuries and vulvo vaginal haematoma can endanger life of the patient unless immediately intervened. Perineal lacerations, tears including 3rd & 4th degree perineal tear are not life threatening. Pelvic floor dysfunction is an outcome of obstetric trauma which usually manifests as POP, or incontinence (urinary / faecal).

Sexual dysfunction, vaginal stenosis, urogenital and rectal fistula manifest at a later date. These dysfunctions are not detrimental to the life of the patient however can severely compromises QoL .

Our institutional statistics reveal that in the last 5 years there were 57499 deliveries and 60% of them delivered vaginally. Out of which only 17 % of women have delivered with out obvious perineal trauma (naked eye). We realize that injury to perineum is the most frequently encountered obstetric trauma. With a total population 1.2 billion (Female - 58,64,69,174) and birth rate 20.97/1000 population (2011) one can understand the magnitude of acute and chronic consequences of obstetric trauma.

With improved obstetric care the occurrence of obstetric fistula has decreased significantly in India. In 1975, Rao reported obstetric causes for 97 % of VVF. But in 2005 the contribution by obstetric fistula has decreased to 62 %. Occurrence of obstetric fistula in 21st century is a matter of concern. As specialized Fistula care centre it is possible to

offer an overall success rate 93.3 % in our Institution.

Promoting institutional deliveries, upgrading primary health centers to manage operative deliveries, increasing the availability of skilled birth attendants, emphasizing the need for timely referral to tertiary centers, providing transport facility and periodically training and upgrading the knowledge of doctors in emergency obstetrics are the measures adopted currently to minimize the morbidity and mortality from obstetric trauma.

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CONFLICT OF INTEREST: None

AUTHOR AFFILIATION: Dr N. Rajamaheswari MBBS., MD., DGO., MCh., (Urology); Professor of Urogynaecology & HOD Department of Urogynaecology; President - Urogynaecology & Reconstructive Pelvic Surgery Society of India (URPSSI) Institute of Social Obstetrics & Govt Kasthurbha Gandhi Hospital, Madras Medical College, Chennai, Tamil nadu, India 600005.

SESSION 5 / 0955-0910

HOW BEST TO REPAIR? THE EVIDENCE

de Souza A

3rd and 4th degree Obstetric Anal Sphincter injury. Risk factors, prevention, evidence based management and post-partum care will be discussed.

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SESSION 5 / 0910-0930

MANAGEMENT OF OASIS – DEDICATED PERINEAL SERVICES

Al-Salihi S

The risk of anal incontinence following OASIS ranges between 15%-61%; while fecal incontinence in isolation is reported to be as low as 2% and as high as 29% following an OASIS ¹.



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The obstetric anal sphincter injuries detection and management have entered a new age since the introduction of ultrasound in assessing suspected injuries. Imaging has helped identify both internal and external anal sphincter defects following mechanical trauma as a result of vaginal birth². Having studied the extent of injuries resulting from such trauma, the opportunity to study the incidence of clinically unrecognized injuries arose. The incidence of what is known as occult anal sphincter injury is suggested to be around 35% in primiparous women and 44% in multiparous women³.

At the Royal Women's Hospital in Melbourne, there is a dedicated perineal clinic where patients are referred, both locally and regionally, for care and management following their perineal injury during the vaginal delivery. The perineal clinic team consists of perineal nurses, physiotherapists, clinicians, sexual counselors and dieticians.

During the 2009/2010 year, there were close to 450 patients who attended the perineal clinic at the Royal Women's hospital. In the following year, there were a comparable number of patients seen at the perineal clinic.

The unit runs a perineal trauma workshop once a year, that is catered towards discussing the latest evidence in perineal trauma repairs and to further endorse the multidisciplinary approach in managing those women. The workshop is well attended by trainees, regional obstetricians, midwives, continence nurses and physiotherapists from all around the country.

A dedicated facility to care for women's perineal and pelvic floor health in a tertiary center is required to house such a multidisciplinary team. We have also found that this facility has the added value of being an epicenter for both training and research for clinicians in the field aspiring to improve future outcomes.

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AUTHOR AFFILIATION: Dr S. Al-Salihi, UroGynaecologist; Royal Women's Hospital, Melbourne, Victoria, Australia.

SESSION 5 / 0930-0945

MEDICO-LEGAL ASPECTS OF OBSTETRIC ANAL SPHINCTER INJURY

McEvoy M

Anal sphincter injuries in obstetrics are common (up to 3% of the population having vaginal births) and are also common causes of initiation of litigation by the patient as a consequence of the severe impairment of quality of life from lifetime fecal incontinence.

While litigation is often initiated in these circumstances, following sound clinical guidelines may mitigate a successful claim. These include accurate identification of the degree and extent of perineal trauma and not missing the so-called occult cases Attendance at a specific teaching course on anal sphincter injury are more likely to diagnose third and fourth degree tears and more likely to successfully repair them, suggesting that the term "occult" might be replaced by the term "unrecognized". Failure to identify third and fourth degree tears could place the practitioner at significant risk of litigation if a poor clinical outcome occurs.

Litigation often concentrates on the prediction and prevention of obstetric anal sphincter injuries such as excessive birth weight, occipito posterior position, nulliparity, epidural analgesia, prolonged second stage, shoulder dystocia, midline episiotomy and forceps delivery. In fact known risk factors (except midline episiotomy) do not predict poor outcomes.

Neither end-to-end or overlapping repair has been proven to be more successful, so claims in this respect are defensible.

Adequate lighting, analgesia and equipment should be available with separate repair of the internal anal sphincter if it is damaged. 3/O-PDS should be utilized with careful attention to the placement of knots away from the skin, leaving knot tying until the end of placement of all sutures and after rectal exam. Broad spectrum antibiotics should be used and bowel motions should ideally be kept soft. Referral to physiotherapy for 6 weeks and a review at 6 weeks by an experienced consultant obstetrician and gynaecologist ideally in the setting of a pelvic floor clinic should be undertaken, particularly by busy units. This allows a collaborative multidisciplinary approach with physiotherapists, obstetricians, gynaecologists with an interest in pelvic floor and colorectal surgeons to collaborate and co-operate.

Long term incontinence is reported at various frequency, depending on whether it refers to solid, liquid or gaseous

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continence, but an overall figure might be that approximately 20% remain incontinent to some degree despite apparently adequate repair. Thus incontinence does not infer negligence. Endo-anal ultrasound is not regarded as an essential tool in the follow-up of these women. Failure to scan is not a sign of poor clinical practice

As with all medical litigation, attention to detailed documentation, providing adequate follow-up, good communication and clear instruction are all extremely important in the prevention of litigation.

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SESSION 6 / 1045-1105

ROLE OF PRE OPERATIVE IMAGING

Lee J

Pre operative planning had always been a cornerstone of successful surgical outcomes. For patients with medical co morbidities, relevant medical imaging provides a comprehensive assessment of the patient. It seems inconceivable for orthopaedic surgeons to operate without reviewing images from X-Rays & CT for surgery planning. What is the role of preoperative imaging for women undergoing pelvic floor surgery?

It is well known that vaginal prolapse is often underestimated.

This could be due to a full bladder or rectum. Importantly, it could also be due to levator co-activation (when doing a Valsalva) that restricts the genital hiatus, partially concealing the full extent of prolapse. Dynamic real-time imaging demonstrates levator co-activation and can help avoid false- negative examination results, reducing the likelihood of unpleasant surprises in theatre. Much less commonly, ultrasonography could avoid unnecessary surgery or potential complications, such as the inadvertent opening of a urethral diverticulum or a Gartner cyst that was misdiagnosed as cystocele.

Imaging of the posterior compartment could identify defects of the rectovaginal septum, presence of an enterocele or rectal intussusception, findings that could (re)direct surgical strategies. Defects of RV septum could suggest a defect- specific repair as appropriate approach; perineal hypermobility may be reduced by plication of the rectovaginal septum and/or levatorplasty. Identification of rectal intussusception may prompt a referral to the colorectal surgeon.

The popularity of using synthetic slings or synthetic mesh in female pelvic floor surgery has also brought upon clinical questions regarding mesh complications. Is the sling too tight, is it in the right position, is there a significant residual – these are all questions that could be answered with a sagittal real time dynamic imaging. Prolapse recurrence could occur after use of synthetic mesh. Was it a proximal arm failure (presumably the mesh arm was dislodged from SSL/ATFP) or distal "slippage" where the mesh was inadequately secured to the bladder base.

Imaging of the central compartment may provide additional information relating to suitability or otherwise of a vaginal route (size, mobility of uterus), length / size of cervix, not to mention an unsuspecting ovarian mass pushing forward a vaginal prolapse.

The role of levator trauma, as seen on 4D ultrasonography or MRI imaging, in conferring risks towards central and apical compartment prolapse has been well documented. Further, presence of such defects has also been shown to increase risk of recurrence following POP surgery. Utilisation of imaging in such a manner, seductively could select patients most at risk for prolapse recurrence, and could aid clinical decision towards use of synthetic mesh, although this ought to be balanced against known disadvantages of mesh use. Prospective studies are already underway to examine the role of levator trauma in predicting risk of recurrence for women undergoing prolapse surgery, in comparative studies.

AUTHOR AFFILIATION: Dr Joseph Lee; Monash Medical Centre, Moorabbin, Mercy Hospital for Women, Heidelberg, Victoria, Australia.



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SESSION 6 / 1105-1125

MANAGING BLOOD LOSS DURING THE DIFFICULT VAGINAL HYSTERECTOMY – TIPS AND TRICKS

Sheth SS

‘We do not, what we ought to
what we ought not, we do
and then lean upon a thought
that chance will bring us through.’

Matthew Arnold

The Subject is vital and can save lives. The management will include vigorous medical treatment to combat blood loss just as in any other surgery due to any other cause. To remedy the situation concurrently will be the surgical management, which needs team work.

To facilitate access and approach, it is essential to find if the bleeding is vaginal or retro-peritoneal – intra-abdominal and to promptly look at important / vulnerable sites to find out bleeder(s) for quick attention and action. Gynecologist needs to be vigilant to exclude causative pre-disposing and iatrogenic factors.

Hysterectomy can be difficult due to limited space, wrong planes for access, uterine vessels, cornual and infundibulopelvic ligament sites, suture and/or clamp slippage etc etc. Alternatively, hysterectomy is made difficult by pre-operative omission or indifference in assessing the patient, or it can be iatrogenic – taking a contraindicated case for VH or not considering a case for TRIAL VH with the anaesthesiologist adding to complications, occasionally. Bladder, rectum, ureters and uterine vessels are in the close surgical neighbourhood and need extra care and attention.

Several tips and tricks, both pre-operative and intra-operative are presented so that timely, meticulous surgical steps with extra care are taken to prevent as well as cope with bleeding and give the best results.

AUTHOR AFFILIATION: Professor Dr Shirish S. Sheth; Mumbai, India.

SESSION 6 / 1125-1145

MANAGEMENT OF URINARY TRACT INJURY

De Ridder D

Iatrogenic injury to the urinary tract is a much feared complication of gynaecological and other pelvic interventions. There is a general lack of evidence based guidance on how to

manage these complications. A review of the literature will be presented. Based on this a treatment algorithm will be presented.

AUTHOR AFFILIATION: Professor Dirk De Ridder MD, PhD, FEBU; Dept. Of Urology KU Leuven, Belgium.

SESSION 6 / 1145-1205

OPTIMAL CATHETER MANAGEMENT / TO PACK / TO DRAIN / EARLY DISCHARGE?

Rosamilia A

Recent publications have supported the use of a retrograde rather than a spontaneous trial of void.

The typical retrograde protocol would be performed on the day of surgery or on the morning of post-operative day. Initially, after confirming that all urine was drained from the bladder with the indwelling Foley catheter, a 300-mL bolus of saline was instilled into the bladder through the indwelling catheter. After removing the catheter, the patient was asked to void within 30 minutes, and the voided volume was recorded. Postvoid residual was indirectly determined by subtracting the voided volume from the 300 mL of instilled fluid. If the patient voided less than 200 mL, catheterization was performed.

The spontaneous technique was performed by allowing the patient's bladder to fill spontaneously over no more than 4 hours. Women were then instructed to void on desire into a measuring container after which straight catheterization was performed to assess the postvoid residual. Two consecutive spontaneous tests were performed for complete assessment using this technique. A residual volume >100ml was deemed unsuccessful.

In a randomised crossover study 50 women underwent both methods of trial of void. Failure rates after first void were 62% for retrograde and 84% for spontaneous. In this study, women were then discharged using intermittent catheterisation and this was required for a mean of 2.5 days if they had failed one technique but 12.6 days if they failed both. Retrograde was preferred by patients (51.1% compared with 44.4%) regardless of randomization. It was also preferred by hospital carers because of speed of performance and the potential for fewer catheterizations. In addition, this method did not delay hospital discharge as was found in some cases with the spontaneous method.

Results of further studies supporting the use of vaginal packing but not drainage post operatively will be presented.

AUTHOR AFFILIATION: Dr Anna Rosamilia; Head of Pelvic Floor Unit, Monash Medical Centre, Clayton, Victoria, Australia.

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SESSION 7 FREE COMMUNICATIONS A / 1330-1350

AN INTERNATIONAL UROGYNECOLOGICAL ASSOCIATION (IUGA) / INTERNATIONAL CONTINENCE SOCIETY (ICS) JOINT TERMINOLOGY AND CLASSIFICATION OF THE COMPLICATIONS RELATED TO NATIVE TISSUE FEMALE PELVIC FLOOR SURGERY

Haylen BT, Freeman RM, Lee J, Swift SE, Cosson M, Deprest J, Dwyer PL, Fatton B, Kocjancic E, Maher C, Petri E, Rizk DE, Schaer GN, Webb R

AIM: To develop a clear, clinically-based consensus (collective opinion) Terminology and Classification for complications related to native tissue female pelvic floor surgery.

STUDY DESIGN, MATERIALS AND METHODS: With the availability of a Terminology and a clinically-based Classification for complications resulting from the use of prostheses and grafts in female pelvic floor surgery¹, an equivalent classification for complications arising from native

tissue female pelvic floor surgery was deemed desirable. This would facilitate comparison studies of complications from the two types of surgery. A Report was developed incorporating: (i) Definitions for all Terminology from a range of sources; (ii) A classification allowing comprehensive coverage of the different types of complications.

Many rounds of Committee review ensued, involving members of the IUGA and ICS Standardization and Terminology Committees and a joint IUGA/ICS Working Group. Each round involved independent review by the relevant Committee Members, collation of comments, and final decision-making on definitions, additions and deletions based on collective opinion (majority or unanimity). The document was subject to Website review by IUGA and ICS members.

RESULTS: The Terminology component of the project involves (i) 2 definitions related to native tissues; (ii) 10 definitions related to the different descriptions for complications. Table 1 of user-friendly A4 colour charts outline these definitions.

Table 2: A CLASSIFICATION OF COMPLICATIONS RELATED TO NATIVE TISSUE (NT) FEMALE PELVIC FLOOR SURGERY

		CATEGORY			
General Description		A (Asymptomatic)	B (Symptomatic)	C (Infection)	D (Abscess)
1	Vaginal: no epithelial separation Include prominence or excessive scarring. Vaginal invagination. Grades of pain from table 4 incorporated	1A: Abnormal finding on clinical examination	1B: Symptomatic e.g. unusual discomfort / pain; dyspareunia (either partner); bleeding	1C: Infection (suspected or actual)	1D = Abscess
2	Vaginal: smaller epithelial separation or ulcer ≤ 1cm	2A: Asymptomatic	2B: Symptomatic	2C: Infection	2D = Abscess
3	Vaginal: larger > 1cm epithelial separation or ulcer	3A: Asymptomatic 1-3Aa if no surgery related pain	3B: Symptomatic 1-3B (b-e) if surgery related pain	3C: Infection 1-3C / 1-3D (b-e) if surgery related pain	3D = Abscess
4	Urinary Tract: compromise or perforation Include fistula and calculus	4A: Small intraoperative defect e.g. bladder perforation	4B: Other lower urinary tract complication or urinary retention	4C: Ureteric or upper urinary tract complication	
5	Rectal or Bowel: compromise or perforation. Include perforation and fistula	5A: Small intraoperative defect (rectal or bowel)	5B: Rectal injury or compromise	5C: Small or Large bowel injury or compromise	5D = Abscess
6	Skin and / or musculoskeletal: complications including discharge, pain, lump or sinus tract formation	6A: Asymptomatic, abnormal finding on clinical examination	6B: Symptomatic e.g. discharge, pain or lump	6C: Infection e.g. sinus tract formation	6D = Abscess
7	Patient: compromise including hematoma or systemic compromise	7A: Bleeding complication including hematoma	7B: Major degree of resuscitation or intensive care* including septic hematoma	7C: Mortality * *(additional complication - if no site is applicable - S 0)	

TIME (clinically diagnosed)

T1: Intraoperative to 48 hours

T2: 48 hours to 2 months

T3: 2 months to 12 months

T4: over 12 months

SITE

S1: Vaginal: area of suture line

S2: Vaginal: away from area of suture line

S3: Adjoining viscous e.g. bladder or bowel

S4: Other skin or musculoskeletal site

S5: Intra-abdominal

- N.B.**
- Multiple complications may occur in the same patient. There may be early and late complications in the same patient. i.e. All complications to be listed. Tables of complications may often be procedure-specific.
 - The highest final category for any single complication should be used if there is a change over time. (patient 888)
 - Urinary tract infections and functional issues (apart from 4B) have not been included.

CODE - T - S



The financial assistance from Boston Scientific towards printing of these reference tables is gratefully acknowledged.



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The Classification incorporated separate Category (C), Time (T) and Site (S) descriptions (a CTS Classification). Table 2 displays the CTS classification.

Seven categories were developed: 3 vaginal complication categories (1-3) and one each for urinary tract (4), rectum/bowel (5) and skin/musculoskeletal complications/compromise (6) and a further category for patient compromise (7). In categories 1-3 and 6, subdivisions indicating a progressive increase in the severity of the complication were: (A) Asymptomatic, (B) Symptomatic, (C) Infection, (D) Abscess. Categories 4, 5 were subdivided depending on the organ involved and the severity of the complication, whilst Category 7 was subdivided on the basis of the severity of the patient compromise.

Time divisions were as follows: T1 - Intraoperative to 48hrs postop; T2 - 48hrs to 2 months postop; T3 - 2 to 12 months postoperative; T4 - over 12 months.

There were five Site divisions: 2 vaginal (S1-S2), adjoining viscus (S3), skin or musculoskeletal (S4) and intra-abdominal (S5)

A 5-stage subclassification is available if pain is involved in the complication (Table 3)

INTERPRETATION OF RESULTS: The Classification is able to codify (6-digit code for each complication; 7-digit if there is pain) all conceivable insertion complications and healing abnormalities from the use of prostheses and grafts in female pelvic floor surgery. Maintaining this level of sensitivity has restricted attempts at further simplification.

CONCLUSION: Consensus has proved to be a successful process for developing this formal Terminology and Classification, which can be applied to (a) Clinical Records; (b) Any database, registry or surgical audit and (c) Academic publications.

REGISTRY PROGRESS: Following publication of the Classification in April 2012 in *Neurourology and Urodynamics* and the *International Urogynecology Journal*, as well as in website and clinical card form, attention will re-focus on progressing a Registry. Non-patient-identifiable data involving (i) country of origin; (ii) classification code; (iii) procedure-type will be collected. Contributors will be able to access online collated Registry data analysis. Close cooperation with national urogynaecology societies is anticipated.

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1. Haylen B.T, Freeman R.M, Swift S et al. (2011). An International Urogynecological Association (IUGA)/ International Continence Society (ICS) joint terminology and classification of the complications related directly to

the insertion of prostheses (meshes, implants, tapes) & grafts in female pelvic floor surgery. *Int Urogynecol J*, 22:3-15. & *Neurourol Urodyn* 30:2-12

AUTHOR AFFILIATION: Bernard T. Haylen^{1*}, Robert M. Freeman², Joseph Lee³, Steven E. Swift⁴, Michel Cosson⁵, Jan Deprest⁶, Peter L. Dwyer⁷, Brigitte Fatton⁸, Ervin Kocjancic⁹, Chris Maher¹⁰, Eckhard Petri¹¹, Diaa E. Rizk¹², Gabriel N. Schaer¹³, Ralph Webb¹⁴; 1.University of New South Wales, Sydney, New South Wales, Australia. 2.Derriford Hospital, Plymouth, Devon, United Kingdom. 3.Monash Medical Centre, Melbourne, Victoria, Australia. 4.Medical University of South Carolina, Charleston South Carolina. United States of America. 5.University Hospital, Lille, France. 6.University Hospital, UZ Leuven, Belgium. 7.Mercy Hospital for Women, Melbourne, Victoria, Australia. 8.University Hospital, Clermont-Ferrand, France. 9.Department of Urology, University of Illinois, Chicago. IL. United States of America. 10.Wesley Hospital, Brisbane, Queensland, Australia. 11.Urogynaecology Department, University of Greifswald, Germany. 12.Peterborough, Ontario, Canada. 13.Kantonsspital, Aarau, Switzerland. 14.Norfolk and Norwich University Hospital, Norfolk, United Kingdom.

SESSION 7

FREE COMMUNICATIONS A / 1350-1400

ELEVATE® TRANSVAGINAL MESH REPAIR: EARLY OUTCOMES OF OVER 200 PROCEDURES AT CARE

Patel PS, Dunkley EJC, Lam A

OBJECTIVE: To evaluate the outcomes of Elevate® transvaginal mesh repair systems.

METHODS: A prospective analysis was conducted on all consecutive patients undergoing Elevate® repair by a single surgeon at a tertiary referral centre between December 2009 and February 2012. Success was evaluated subjectively based on patients' answers to standardised questions, and objectively using the pelvic organ prolapse quantification (POP-Q) scale.

RESULTS: A total of 150 patients, at a mean age of 59 ± 11 years, underwent 221 procedures: 71 (47.3%) had Anterior and Posterior Elevate®, 32 (21.3%) had Anterior Elevate® alone, and 47 (31.3%) had Posterior Elevate® alone. The median POP-Q Stage was 3, and over a quarter had recurrent prolapse.

Seven patients (6.7%) underwent a hysterectomy at the time

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of their repair; 39 (26.0%) had a concurrent continence procedure. The average overall operative time and estimated blood loss were 88 ± 24 min and 160 ± 110 mL respectively. Intra-operative complications consisted of 12 (8.0%) cases of bleeding and 1 (0.7%) bladder perforation with the Anterior Elevate®. Seven of 110 (6.4%) planned Anterior Elevate® procedures could not be performed due to difficulty reaching the sacrospinous ligaments or bleeding from paravesical venous plexuses. Post-operative complications included 5 (3.3%) cases of cystitis, 4 (2.7%) post-operative bleeding or haematoma formation, 5 (3.3%) transient voiding dysfunction, and 1 (0.7%) pulmonary embolus.

Five patients were lost to follow-up and 2 had yet to return for their 6-week post-operative visit; the remaining 143 patients were followed for an average of 7 ± 6 months. The objective cure rate of Elevate®, defined as a POP-Q stage of ≤ 1 in the treated compartment(s), was 87.1%, with the majority (88.9%) of the failures occurring anteriorly. The procedural failures were first diagnosed at an average of 9 ± 5 months, and were symptomatic in 15 (42.3%) patients. Three (1.4%) mesh erosions occurred at an average of 6 ± 1 months, with only one patient requiring surgical treatment. Vaginal stenosis was encountered in 1 (0.7%) patient, 4 months after her Posterior Elevate® and anterior fascial repair, and was managed conservatively with dilators.

Subjectively, improvement was noted in 91% of patients with general prolapse symptoms, 88% with obstructed voiding symptoms, 70% with bowel symptoms, and 76% of patients with sexual symptoms. De novo urinary stress incontinence and dyspareunia occurred in 16.0% and 8.6% respectively.

CONCLUSION: Elevate® is a safe and effective minimally invasive option for pelvic organ prolapse.

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SESSION 7

FREE COMMUNICATIONS A / 1400-1410

TRANSVAGINAL MESH REPAIR SYSTEMS: EXPERIENCE WITH OVER 500 PROCEDURES AT CARE

Patel PS, Dunkley EJC, Lam A

OBJECTIVE: To compare the outcomes of Elevate® transvaginal mesh (TVM) repair system with Prolift® for pelvic organ prolapse.

METHODS: A prospective observational study was conducted on all consecutive women who underwent Elevate® or Prolift® repair by a single surgeon at a tertiary referral centre in the 6 year period starting from February 2006. Patients' responses to standardised questions on bowel, bladder and sexual function, and objective pelvic exam findings using the pelvic organ prolapse quantification (POP-Q) scale, were documented at pre-operative and routine post-operative visits at 1- and 12-months, as well as at any unscheduled visits. The primary outcome was objective anatomic cure, defined as POP-Q stage ≤ 1 .

RESULTS: A total of 514 TVM procedures were performed during the study period: 221 Elevate® and 293 Prolift®. The Prolift® group was older (mean difference 2.9 years, $P=0.011$), and had a significantly higher proportion of hysterectomised patients (49.2% vs. 30.7%, $P=0.001$), who were less sexually active (66.4% vs. 88.5%, $P<0.001$), and had recurrent prolapse (46.7% vs. 26.0%, $P<0.001$). There were no differences in BMI, parity, menopausal status, or the baseline POP-Q stage.

Concurrent continence procedures were performed in 26.0% and 13.7% of Elevate® and Prolift® cases respectively ($P=0.005$), with the Prolift® group taking longer (mean difference 15 min, $P<0.001$), and having greater blood loss (7.2 g/L drop in haemoglobin levels, $P<0.001$). In the immediate post-operative period, the Prolift® group suffered more febrile episodes ($P=0.046$).

Seven patients from the Elevate® group and two from the Prolift® group were lost to follow-up; the remaining were analysed at an average of 7 months' follow-up. While there was no difference in the objective anatomic cure rate (87.8%), or the mean POP-Q Stage at final follow-up (0.6), the Prolift® procedures were associated with a higher number of mesh erosions (10.3% vs. 1.4%, $P<0.001$).

CONCLUSION: While both the Elevate® as well as the Prolift® TVM systems are effective options for pelvic organ prolapse, the former is associated with less operative morbidity and fewer mesh erosions.

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SESSION 7

FREE COMMUNICATIONS A / 1410-1420

OUTCOMES AND COMPLICATIONS FOLLOWING VAGINAL MESH FOR PELVIC ORGAN PROLAPSE SURGERY

Cheong A, Avery D, Rosamilia A, Lee J

AIMS: To determine the rate and to classify complications as per the IUGA/ICS¹ terminology following vaginal mesh surgery after 12 – 48 month follow up. To compare complications of different types of mesh and to discover risk factors of mesh complications and success.

BACKGROUND: The reported rate of complication following the use of vaginal mesh kits varies, most studies have only had short term follow up or include only one type of mesh or kit.² There is also debate of the risks of non trochar versus trochar mesh.

METHOD: All women who had pelvic floor surgery using mesh at Monash Pelvic Floor Clinic from July 2006 until December 2010 will be included in the study. The choice of conventional pelvic organ prolapse surgery or the use vaginal mesh surgery was at the discretion of the surgeon and the patient. Outcomes will be assessed by POP-Q score on clinical exam. For those who defaulted from follow up, telephone interview would be conducted. PGII (patient global impression of improvement) will be asked at 12-48 months post operatively. Details on patient characteristics, operative techniques and operative complications will be discovered by chart review and by telephone questionnaire. These results will then be analysed to determine risk factors for complications following mesh surgery.

RESULTS: 160 women aged 38-90 (mean 65.7±11.1) underwent synthetic vaginal mesh kits from June06 – Mar 11. Median parity was 3 (0-11), mean BMI 28.2±5.7 (15.1 – 42.6). Clinic follow up ranged from 0.5 – 26m (mean 4.6±4.6). Telephone follow up ranged from 6.5 – 69.1m (mean 24.6±14.4). Three leading points of POPq (Ba, C, Bp) improved post operatively – (Ba 0.9±2.1, -2±1.2 ;C -2±4.5, -6±4.0 ;Bp 0±2.3, -2±1.1 ;preop and post op respectively). Subjective symptoms and overall global impression of improvement will be presented together with a detailed analysis of complication rate using updated terminology.

CONCLUSION: A detailed perioperative outcomes using IUGA/ICS terminology on Mesh complication classification is presented on a cohort of patients who underwent mesh surgery from 2006.

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1. Haylen BT, Freeman RM, Swift SE, et al. An International Urogynaecological Association (IUGA)/International Continence Society (ICS) joint terminology and classification of the complications related directly to the insertion of prostheses (meshes, implants, tapes) & grafts in female pelvic floor surgery. *Int Urogynaecology J* 2011; 22:3
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AUTHOR AFFILIATION: A. Cheong¹, D. Avery¹, A. Rosamilia¹, J. Lee^{1,2}; 1.Monash Medical Centre Moorabbin, Victoria, Australia. 2. Mercy Hospital for Women, Heidelberg Victoria, Australia.

SESSION 7

FREE COMMUNICATIONS A / 1420-1430

ABDOMINAL HYSTERECTOMY FOR BENIGN DISEASE: STILL AN OPEN QUESTION?

Chow JSW, Smith CJ, Hardas G, Merkur H

BACKGROUND: A laparoscopic approach to hysterectomy offers several advantages over an open approach. Laparoscopic hysterectomies are associated with less postoperative pain, earlier discharge from hospital, quicker recovery and less wound infections¹. A laparoscopic approach can also be associated with an increased risk of ureteric injury and longer operating times¹. An open approach may be required when a laparoscopic approach is not feasible or when preferred by surgeon or patient, or when there are technical difficulties or complications during laparoscopy.

OBJECTIVES: The study examines the rate of conversion to laparotomy in women undergoing laparoscopic hysterectomy and the rate of planned open hysterectomy in a benign gynaecologic unit. It also aims to identify factors associated with conversion and planned open hysterectomy.

METHOD: A three year retrospective review of laparoscopic assisted and abdominal hysterectomies in the SWAPS unit is presented. The rate of initial and conversion to open hysterectomies is outlined. Pre- and intraoperative variables for laparotomy are examined, including BMI, previous abdominopelvic surgery, uterine size, and vascular, bladder and bowel complications.

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The presentation discusses whether predictive factors for open hysterectomy can be identified. These results will assist in counselling and planning the appropriate route of hysterectomy for women with benign disease.

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AUTHOR AFFILIATION: J. S. W. Chow, C. J. Smith, G. Hardas, H. Merkur; Sydney West Advanced Pelvic Surgery (SWAPS) Unit, New South Wales, Australia.

SESSION 7

FREE COMMUNICATIONS A / 1430-1440

ANALYSES OF THE ASSOCIATION OF RISK FACTOR PARAMETERS WITH MESH EXPOSURES FOLLOWING PERIGEE AND APOGEE PROCEDURES

Kasianandan A, Kannan K, Rane A

AIM: To analyse and study the influence of risk factors on the occurrence of mesh exposures in patients who underwent perigee and apogee procedures for anterior and posterior compartment syndromes.

METHOD: A retrospective case study included the analysis of all 188 patients who underwent apogee and perigee procedures in the Townsville Hospital, Australia from 2004 – 2009.

RESULTS: As there is very limited literature information to support or refute any specific risk factors associated with mesh exposure, our study was aimed at identifying the association of risk factors with the mesh exposure.

A total number of 188 perigee and apogee procedures were performed during the 4 year period. Twenty nine (15.4%) patients in total were diagnosed with mesh exposures.

The risk factor parameters included for the analysis of characteristics of patients with mesh exposures were age, smoking, menopausal status, pre operative use of ovestin cream, oral hormone replacement therapy, diabetes mellitus, previous hysterectomy or vaginal surgeries and concomitant surgery.

The only statistically significant difference in the 2 groups among all the primary characteristics as mentioned before was an association between oral hormone replacement therapy and the mesh exposure. These women were on the oral HRT for menopause rather than prophylaxis to prevent mesh exposure and the mechanism of contribution remains unexplainable.

The study also identified the reduction in the pattern of occurrence of mesh exposure from 80% and 88.9% in the first 2 years of the introduction of the procedure among the perigee and apogee groups respectively to 20% and 11.1% after two years of commencement of the procedure. We believe either the change adopted in the skin closure technique which included the introduction of a separate fascial layer closure followed by the skin closure or the introduction of a lighter and softer mesh might have contributed to this difference.

The study also shows the rate of mesh exposure being high in the first year after the procedure and the incidence subsequently declines with the progress of time.

CONCLUSION: The study shows no significant risk factors identified to be associated with mesh exposure. The other significant finding is the dramatic reduction in the trend of incidence of mesh exposure over a period of 4 years since the introduction of the procedure. This can be well attributed to the skin closure technique or change in the type of the mesh used during the procedure.

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SESSION 7

FREE COMMUNICATIONS A / 1440-1450

LAPAROSCOPIC HYSTERECTOMY AND THE OBESE PATIENT: A REVIEW OF SURGICAL OUTCOMES ACCORDING TO BODY MASS INDEX

Smith CJ, Chow JSW, Hardas G, Merkur H

INTRODUCTION: Obesity is a significant risk factor for peri-operative complications¹. With rates of obesity on the rise², gynaecologists can expect to be confronted with greater challenges in providing safe surgical care. Laparoscopy is currently the preferred approach for obese patients requiring pelvic surgery as it is thought to reduce the risk of peri-operative complications while facilitating a more rapid recovery³. Further research is needed to assess the impact



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of obesity on surgical outcomes following laparoscopic hysterectomy.

OBJECTIVE: To compare peri-operative parameters including complications for laparoscopic hysterectomy for underweight, normal, overweight and obese patients.

METHODS: Patients having undergone laparoscopic hysterectomy for non-malignant reasons over a 3 year period were identified from Sydney West Advanced Pelvic Surgery (SWAPS) Unit database and allocated into weight categories according to the World Health Organisation (WHO) Body Mass Index classification. Outcomes including duration of surgery, intra-operative complications, uterine weight, post-operative complications, and length of stay were retrospectively analysed.

OUTCOME: Our results will be used to confirm the feasibility of laparoscopic hysterectomy in the obese patient.

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AUTHOR AFFILIATION: C. J. Smith, J. S. W. Chow, G. Hardas, H. Merkur; Sydney West Advanced Pelvic Surgery Unit, New South Wales, Australia.



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SESSION 7

FREE COMMUNICATIONS B / 1330-1340

CONCOMITANT ENDOMETRIAL ABLATION AND HYSTEROSCOPIC STERILISATION: THE LATEST EVIDENCE

Lee S, Ang C, Soo S

INTRODUCTION: Despite recommendations from the American College of Obstetricians and Gynecologists (ACOG), the United States Food and Drug Administration (FDA), and manufacturers of Essure and Adiana contraceptive devices, many Australian practitioners continue to perform concomitant endometrial ablation and hysteroscopic sterilization with either Essure or Adiana. This presentation attempts to clear up the controversy.

AIM: To review the latest evidence available in the literature pertaining to concomitant endometrial ablation and hysteroscopic sterilisation. Recommendations from various academic and regulatory bodies as well as published peer-reviewed articles will be examined and a summary presented.

RESULTS: This presentation first introduces the options for endometrial ablation and hysteroscopic sterilisation, then discusses the recommended order in which to perform same-day endometrial ablation and hysteroscopic sterilization. We discuss the suboptimal reliability of the three-month hysterosalpingogram (HSG) as the reason why the ACOG, FDA and manufacturers of Essure and Adiana recommend that these two procedures not be performed together. To conclude, we summarise the latest published peer-reviewed articles, which form the basis for Conformité Européenne's (CE) recent landmark decision to approve transvaginal ultrasound (TVU) as a safe and reliable confirmation test for the Essure procedure.

CONCLUSION: TVU is a reliable confirmation test for the Essure procedure and therefore has the potential to substitute the HSG as the gold standard in this role. This effectively overcomes objections against same-day endometrial ablation and hysteroscopic sterilization.

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SESSION 7

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A PROSPECTIVE STUDY ON OBSTETRIC LEVATOR TRAUMA AND WOMEN'S PERCEPTION OF PELVIC FLOOR INTEGRITY AND SEXUAL FUNCTION

Yusuf S, Thibault-Gagnon S, Dietz HP

OBJECTIVE: To determine associations between childbirth-related levator trauma and self-reported pelvic floor and sexual function after a first delivery.

Background: In 10-30% of women, vaginal delivery results in avulsion of the levator ani from its insertion onto the pubic bone, while levator microtrauma or traumatic overdistension occurs independently of avulsion in about 30% of women after a first delivery¹. Both types of injury have been shown to be associated with pelvic organ prolapse and prolapse recurrence after pelvic reconstructive surgery². To date however, there is no literature on the impact of delivery-related levator trauma on female sexual function.

METHODS: 294 women with a first ongoing singleton pregnancy were assessed by 4D translabial ultrasound at 36-39 weeks gestation and at 3-6 months postpartum. A questionnaire on pelvic floor and sexual function following childbirth was also completed. Ultrasound was performed with the patient after voiding in supine - at rest, on maximal Valsalva, and on pelvic floor muscle contraction (PFMC). The diagnosis of levator avulsion was made on tomographic ultrasound (TUI) in the postpartum volumes obtained on PFMC³. Microtrauma was diagnosed if an increase of over 20% in hiatal area was found when comparing ante and postpartum volumes. Patients answered questions using a 5-point Likert scale. Mean questionnaire scores were computed for each of the following domains: Sexual activity, Sensation on sexual intercourse, Sexual arousal and orgasm, Pelvic organ prolapse symptoms, Pelvic floor integrity and function. Levator avulsion and microtrauma were analyzed against questionnaire responses using ANOVA and chi-square tests.

RESULTS: Participants were seen on average 5.2 months after their delivery (SD 2.6, range 2.3-22.4). Levator avulsion was diagnosed in 14% (n=42/292; 25 unilateral, 17 bilateral). Levator microtrauma was assessed only in women without avulsion (n=252) and was diagnosed in 26% of these (n=64/245). Levator avulsion was significantly associated with questionnaire scores for the Pelvic floor integrity and function domain (P<0.0001) but not with any of the other four domains. Microtrauma was not associated with scores for any questionnaire domains.



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CONCLUSION: The effect of levator trauma on sexual function 3–6 months after childbirth seems to be limited to a perception of reduced integrity and function of the pelvic floor muscles. The effect of avulsion on other domains of sexual function seems to be largely negligible.

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SESSION 7

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COMBINED LAPAROSCOPIC AND CYSTOSCOPIC EXCISION OF DEEP INFILTRATING ENDOMETRIOSIS INVOLVING BLADDER

Chao F, Rosamilia A

INTRODUCTION: Endometriosis involving the urinary tract is a rare condition with specific surgical implications. Bladder involvement is the most frequent location in cases of urinary tract endometriosis. We present a case of deep infiltrating endometriosis involving the bladder treated by partial cystectomy using a combined laparoscopic and cystoscopic approach.

CASE: 24-year-old female presented with cyclical pelvic pain and haematuria on background history of long-standing endometriosis. A combined laparoscopic and cystoscopic approach was performed to remove the deep infiltrating endometriotic nodule involving the bladder. The bladder was first mobilised from the anterior uterine wall, cervix and vagina laparoscopically with the aid of a 45mm McCartney tube. Cystoscopic delineation of the bladder component of the endometriotic nodule and cystotomy under laparoscopic guidance was then performed after the bladder had been

mobilised. The bladder was sutured in a single layer so as not to reduce the bladder capacity too significantly. Liga clips were used to aid in providing tension on the sutures ensuring that the sutures were water-tight.

RESULTS: Complete excision of bladder endometriosis was achieved. The patient was discharged home after 48 hours with catheter drainage for 7 days. A cystogram prior to removal of the catheter revealed no evidence of bladder leakage from the suture line. At 6 months follow-up, the patient was painfree on Yasmin after ceasing Zoladex 2 months prior and has no symptoms of bladder dysfunction.

CONCLUSION: It is well established that partial cystectomy provides the best results in the management of bladder endometriosis (1-3). Treatment failure after transurethral resection has been reported to be as high as 35% (3). We believe that a combined laparoscopic and cystoscopic approach offers excellent visualisation of the pathology and enables the surgeons to safely remove the nodule in its entirety.

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SESSION 7

FREE COMMUNICATIONS B / 1400-1410

OUTCOMES OF MONARCTM VERSUS MINIARCTM SLINGS IN PATIENTS WITH INTRINSIC SPHINCTER DEFICIENCY

Iyer J, Kasianandan N, Delpachitra S, Pujar T, Randhawa B, Rane A

AIM: To assess the cure rates of TOT (Monarc) versus Mini sling (Miniarc) in patients with Intrinsic Sphincter Deficiency (ISD) over a period of 30 months for Monarc and 12 months for Miniarc.

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METHODS: We did a retrospective chart review of all patients between 2008- 2010 with Stress Incontinence and who underwent mid-urethral sling surgery for the same. Women with USI and ISD, defined as maximum urethral closure pressure < 20cm. The pre- and post-operative protocol included: complete urogynaecology history and questionnaire three day bladder diary, physical examination, multi-channel urodynamics testing, 1 hour pad test and a cystoscopy. In addition a postoperative QOL questionnaire was administered for subjective assessment of quality of life (QOL) and treatment success. Objective cure was defined as no urinary leak on postoperative urodynamics in the absence of symptoms of stress incontinence. Subjective cure was defined as leakage of urine on Urodynamics without corresponding symptoms.

RESULTS: A total of 386 cases underwent Monarc sling and 45(11.65%) had ISD. 167 patients had the Miniarc sling of which 25(14.9%) had ISD. 18 (33.33%) patients were objectively cured after Monarc whereas 26 patients (57.77%) showed evidence of subjective cure. The Miniarc objective cure rates were 72% (18 patients) whereas 84% (21 patients) were subjectively cured. More patients 96% (24/25) in the Miniarc group were either very satisfied or satisfied as opposed to 34/45 (75.5%) patients in the Monarc group. There were 3(6.38%) cases of failure in the Monarc group against 12% (3 patients) in the Miniarc group.

CONCLUSIONS: The results although limited by small numbers raise interesting possibilities. At first glance there appears to be a significantly better success rate in women with ISD undergoing the MiniarcTM compared with MonarcTM. Satisfaction rates were higher in the Miniarc group. At 1 year follow up Miniarc sling shows considerable promise in the management of patients with ISD. We believe this is because of the 'tensioned' nature of the sling.

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SESSION 7

FREE COMMUNICATIONS B / 1410-1420

BIOLOGICAL EXTRACELLULAR MATRIX GRAFTS (SURGISIS) FOR THE TREATMENT OF MESH EXPOSURE AND VAGINAL STENOSIS

Ghosh B, Parker J, Cario G

Pelvic organ prolapse is common and occurs in up to 50% of women. A wide variety of surgical treatments are available,

including native tissue repairs, defect specific repairs, and repairs with synthetic mesh and biologic grafts. There is currently much debate regarding the most efficacious approach with lack of consensus regarding optimal treatment¹.

A reported 29% long term recurrence risk associated with native tissue repair has led to the development of a number of new techniques including the use of numerous prostheses (synthetic mesh or biological grafts) for tissue reinforcement in prolapse surgery. This significant increase in use of prostheses is not without added risks and the FDA (USA) has recently issued a safety communication on serious complications associated with transvaginal mesh placement. In addition, a report on the terminology and classification of complications related to the use of prostheses in female pelvic floor surgery has recently been developed by a joint IUGA/ICS working group to assist with patient management and clinical research².

Mesh erosion can complicate up to 25% of cases, resulting in symptoms of dyspareunia, pain and bleeding. These symptoms can have significant deleterious effects on quality of life. There is lack of evidence to guide optimal management of mesh erosion and surgical repair is needed when conservative measures fail³.

We present two cases: one with mesh exposure following vaginal mesh placement and one with symptomatic vaginal stenosis following prolapse surgery who were treated with biological tissue grafts (Surgisis). We will discuss the indications and techniques of surgical treatment in these cases.

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SESSION 7

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PREVALENCE OF PELVIC ORGAN PROLAPSE AND CORRELATION OF SYMPTOMS WITH PROLAPSE SEVERITY AND LOCATION IN PATIENTS ATTENDING UROGYNAECOLOGY CLINIC, SIRIRAJ HOSPITAL

Kezang, Leerasiri P, Hengrasmee P

OBJECTIVE: To evaluate the prevalence of pelvic organ prolapse in terms of stages and location using the POP-Q staging system. We also aimed to study the correlation of prolapse-related symptoms with location and stages of the prolapse.

METHOD: This retrospective study gathered data from 710 women with different degrees of pelvic organ prolapse examined at Urogynaecology Clinic, Siriraj Hospital during January 2009 and December 2010. POP-Q staging system was used to evaluate both location and stages of prolapse. Questionnaires assessing prolapse-related symptoms were also implemented. These symptoms were categorized into 3 groups including prolapse, urinary, and defecatory, and were graded according to severity and degree of bother using Likert scale. Finally the correlation of symptoms with regards to location and severity of prolapse was analyzed using Chi-square test.

RESULTS: Among 710 patients, 165 (23.2%) had stage I prolapse; 323 (45.5%) had stage II prolapse; 119(16.8%) had stage III prolapse, and 103(14.5%) had stage IV prolapse. Anterior compartment prolapse was found to be most prevalent among patients, 446 cases (62.8%), while apical and posterior compartment prolapse were found in 154 cases (21.7%) and 110 cases (15.5%) respectively. Sensation or visualization of vaginal bulge was significantly associated with worsening stages of pelvic organ prolapse ($p<0.001$). Voiding dysfunctions such as prolonged flow, straining, and digital manipulation were significantly associated with advanced stage prolapse ($p<0.001$). However symptoms typically attributed to anterior and posterior compartment prolapse did not correlate with the descent of the respective compartment.

CONCLUSION: POP-Q stage II prolapse was the most prevalent prolapse seen among patients (45%). Regarding prolapse location, anterior compartment prolapse was the predominated prolapse found in 62.8% of patients. Bulge symptom and voiding difficulty correlated significantly with worsening stage of prolapse. However, symptoms did not correlate with compartment-specific defects.

KEYWORDS: Pelvic organ prolapse, symptoms, stage, severity

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SESSION 7

FREE COMMUNICATIONS B / 1430-1440

PROLAPSE AND SEXUAL MATTERS SYMPTOMS AFTER SURGERY FOR PELVIC ORGAN PROLAPSE (POP)

Ulrich D, Dwyer P, Rosamilia A, Lim Y, Lee J

INTRODUCTION: Goals in female pelvic floor surgery include not only anatomical restoration, but also improvement in urinary, bowel and sexual symptoms. Changes in the quality of life and in sexual function are one of the main concerns following vaginal surgery. The ICIQ-VS is a validated 14 item psychometrically questionnaire that has been validated to measure the presence, severity, and impact of vaginal symptoms and associated sexual matters on quality of life and outcome of treatment¹. The aim of this study was to investigate the post operative anatomical, subjective prolapse and sexual function outcomes following different vaginal prolapse surgeries using the ICIQ-VS questionnaire in a prospective observational series.

MATERIALS AND METHODS: For this prospective study consecutive women undergoing surgical management for POP at different hospital sites in Melbourne between 2009 and 2010 were offered to participate in this study. The ICIQ questionnaire was completed prior to surgery as well as 6 and 12 months postoperatively. The questionnaire assesses the

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presence and the severity of the symptoms by a 3 or 4 tailed scale ranging from 0-53 points for the vaginal symptom score and 0-58 for the sexual matters score. Worsening of vaginal or sexual matter symptoms is accompanied by an increase in the score. Native tissue female pelvic floor reconstructive surgery as well as vaginal and laparoscopic mesh operations were performed. Women with stress urinary incontinence received a concomitant midurethral sling including TVT, Advantage®, Monarc® and Miniarc®.

RESULTS: 103 women aged 32-84 years (mean:61±11) participated in the study; 84(82%) returned the 6 month questionnaire and 87(84%) the 12 month questionnaire. Mean BMI was 26.8(± 4.7), mean parity was 2.5(±1.2). The mean vaginal-symptom score was 23(±9) preoperatively, 6 months after surgery it decreased significantly to 7(± 8) and 12 months after surgery to 7(± 7) (p< 0.001). The mean sexual matters score was 22(±19) preoperatively, 6 months postoperatively it decreased significantly to 12 (± 18), 12 months after surgery to 10 (± 14) (p< 0.05) with no significant differences between the surgical procedures. Three of the measured points of the POP Q exam representative of each compartment improved significantly after 6 and 12 months (Ba: 0±2, -2±1, -2±1, C:-2±3, -5.4±2.1, -5.6±1.5, Bp: 0±1.5, -2.6±0.6, -2.6±0.6; preoperatively, 6 months and 12 months postoperatively, respectively.)

DISCUSSION: Surgical intervention for POP improved the vaginal symptom and the sexual matters score as well as the POP Q at 6 and 12 months post-operatively.

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SESSION 7

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MINIARC AND MONARC SUBURETHRAL SLING IN WOMEN WITH STRESS URINARY INCONTINENCE – A RANDOMISED CONTROLLED TRIAL

Lee J, Rosamilia A, Dwyer P, Lim Y

INTRODUCTION: Systematic reviews of retropubic or transobturator midurethral tapes suggest equivalent efficacy, at least in the medium term^{1,2,3}. Although case reports on bowel and major blood vessel injuries following the retropubic procedure have led to the development of the obturator route for mid-urethral tape placement, both midurethral systems continue to have clinically significant complications such as bladder injuries, vagina mesh exposures, voiding difficulty, denovo urgency and groin/thigh pain^{1,3}. The MiniArc™ procedure is an exitless midurethral sling device that is designed to allow fixation when advanced into the endopelvic fascia through a small vaginal incision, potentially avoiding complications associated with trocar passage. This study aims to compare the efficacy between Monarc and Miniarc slings, with the objective of determining the difference (if any) in objective cure rates (absence of urodynamic stress incontinence or cough stress test), subjective cure rates (using validated questionnaires), perioperative complications and sexual function at 6months, 12 months and 24 months.

METHODS: Women who have stress urinary incontinence or urodynamic stress incontinence are randomised to receiving either Monarc or Miniarc. Women with intrinsic sphincter deficiency, previous tapes, untreated detrusor overactivity or significant voiding dysfunction are excluded. This RCT is powered to detect a clinical difference of 15%, and allows for an attrition of 15% with a sample size of 220. Computer generated random allocation is concealed and stratified to centre. Standardised proformas are used to facilitate prospective collection of data to evaluate objective and subjective outcomes following surgery. Surgeries were performed according to manufacturer's instructions. Miniarc was tensioned to snug. Urodynamic studies were performed pre operatively and 6m post operatively. Definitions used conformed to IUGA/ICS terminology. Outcome measures were used in accordance to IUGA guidelines. CONSORT guidelines were followed for standardised reporting.

RESULTS: 273 women were assessed for eligibility, of which 31 declined participation, 2 indicated a preference to Miniarc (refused randomisation), 4 were excluded post randomisation



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(3 did not meet criteria, 1 withdrawn from surgery). 5 women from the Monarc arm cancelled surgery, 4 from the Miniarc arm cancelled surgery with 1 deemed unfit for surgery medically. 226 women aged 31-81 (mean 52.9±10.1) received Miniarc (113) or Monarc (113). Median parity was 2 (0-6), mean BMI 28±5.9 (15 – 46). 47/113 within the miniarc arm had concomitant prolapse operations compared with 51/113 in the monarc arm. Within Miniarc arm 3 had trocar re-pass (1R, 2L). In Miniarc sling only group op time ranged 5-42m (mean 8.9m±5.2), with total number of panadeine tablets used in first 5 days 0-10 (mean 1.5 ±2.6). In miniarc only group 1/66 had catheter for 1 day, for those with concomitant POP surgery, 2/47 had catheter for 2 days, 1/47 had 3 days of catheter (Ant/Post Rep) and 1/47 had catheter for 7 days (Ant Rep). 10 patients in the miniarc arm reported groin pain with duration 2-5d (7 patients) and 3 patients had pain till 2w - 3w. Within Monarc arm 12 had trocar re-pass (9L 3R). In Monarc sling only group op time ranged 6 – 35m (mean 10.6±5.6), with total number of panadeine tablets used in first 5 days 0-40 (mean 5.5 ±8.2). In Monarc only group 4/62 had catheter for 1-2 days, for those with concomitant POP surgery, 19/51 had catheter for 1-2 days, 1/51 had 4 days of catheter (VH AP Ant Elevate) and 1/51 had catheter for 7 days (Uphold). In total 34 patients in the monarc arm reported groin pain with duration of 1-3d (20 patients), 7d (7 patients) and 7 patients had pain till 2-4w. At 6 months follow up, there was no significant difference in subjective outcomes with 5/77 in the miniarc group (4/47 sling only, 1/30 Conc POP) reported SUI compared with 11/76 in the monarc group (6/40 sling only, 5/36 Conc POP) [p=0.121]. There was no significant difference in objective outcomes at 6 months as 12/70 in the miniarc group had USI (9/43 sling only, 3/27 Conc POP) compared with 12/80 for the monarc group (9/45 sling only, 3/35 Conc POP) [p=0.82]. Within both monarc and miniarc groups 2 (each) had repeat midurethral sling (TVT) surgery.

CONCLUSIONS: Patients with miniarc sling only appears to need less analgesia and have less groin pain compared to those who have monarc sling only. At this short term follow up, efficacy of miniarc appears comparable to monarc.

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SESSION 7 FREE COMMUNICATIONS C / 1330-1340

A RARE ANATOMICAL VARIATION OF THE FEMORAL NERVE: A REPORT OF A CASE

Arachchi A, Vasudevan HA

During routine dissection of an 85 year old cadaver the following anatomical variation was noted.

As denoted from the image above the femoral nerve has multiple intraperitoneal branches (assessory branches). This is a true variation to its normal pathway depicted below. The femoral nerve originates from L2 to L4 segments of the spinal cord, deep to psoas major and within the substance of iliacus. It then runs lateral to psoas major and supplies iliacus. At the midinguinal point the femoral nerve runs deep to the inguinal ligament over the iliopsoas tendon and then is divided into its superficial and deep branches by the (lateral circumflex femoral artery) from the profunda femoris artery. The superficial branches are (A/ cutaneous to the medial and lateral aspect of the leg and B/ muscular to pectineus and Sartorius). The deep branches are muscular to the subgroup of rectus femoris (vastus medialis, vastus lateralis, vastus intermidus, articularis genus).

The femoral nerve then runs as the saphneous nerve within the sub sartorial canal on the bed of adductor magnus deep to Sartorius. Having given its infrapatella branch the saphneous nerve then descends on the medial aspect of the leg. As denoted from this simple summary of the course of the femoral nerve; it is very clear that these branches depicted in the image above are a clear variation. It may represent intraperitoneal or assessoy branches; It may represent a higher division of the femoral nerve into its superficial branches; it may represent a (or many) assessor obturator nerves (running over the superior pubic ramus) or may represent a further assessory lateral femoral cutaneous nerve.

This particular image and variation is an anatomical variant. It is not described in the literature.

We present a case which may be of value to both anatomists and general surgeons.

Surgeons dealing with particular cases such as psoas abscess, a retroperitoneal mass may need to be weary of such a variation and note that it does exist.

This report depicts a rare variation.

To the best of our knowledge it is not noted in literature.

ACKNOWLEDGEMENTS: We would like to thank all those who contributed to this paper including the institution that

allowed us to further our knowledge of anatomy by providing the cadavers for dissection.

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CONTRIBUTIONS: University of Melbourne. The department of anatomy and cell biology

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No conflict of interest exists in this paper

SESSION 7 FREE COMMUNICATIONS C / 1340-1350

PROBLEMS WITH THE BOERMA ANTERIOR GASTROPEXY FOR GIANT HIGH RISK PARA ESOPHAGEAL HERNIAS

Arachchi A, Kohn G

INTRODUCTION: We present a case of an elderly female who presented to the emergency department with a large type IV Para esophageal hernia (PEH). The patient presented with cardio respiratory embarrassment secondary to the volume effect of the intrathoracic hernia. The hernia was unable to be adequately decompressed by nasogastric tube placement at gastroscopy.

In this report, we discuss surgical methods of repair in high risk emergent patients, and describe a complication of the anterior gastropexy which was ultimately performed.

CASE REPORT: A 73 year old female presented with acute dyspnea after three days of left sided intermittent non-pleuritic chest pain and a non-productive cough. She also had new right lower quadrant abdominal pain and vomiting and had not opened her bowels in four days. Her past medical history was notable for schizophrenia, depression, gastro-oesophageal reflux disease and a Grade 1 hiatal hernia. She was severely dyspnoeic on presentation, with oxygen saturations of 72% on 15Litres of oxygen when sitting up, but saturated at 98% when lying flat. She was tender in the lower abdomen and had tinkling bowel sounds. Imaging revealed a very large hiatal hernia with an intrathoracic stomach lying posteriorly. There was also a very large loop of large intestine



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which had herniated through the oesophageal hernia, which was a sigmoid volvulus. Emergency laparoscopy revealed that the entire transverse colon was in the chest and this was reduced without repair of the hiatal defect. The stomach was unable to be reduced due to a short esophagus so a PEG tube was inserted into the body of the stomach for gastropepy. Post operatively the patient required ongoing inotropic and ventilatory support. The hiatal hernia recurred resulting in collapse of her right main bronchus, warranting further operative management. Given the size of the hiatal defect, the patient and risk of recurrence of small bowel herniation, the patient was felt to need formal hiatal repair with a Collis gastroplasty and mesh cruroplasty. This was performed at a larger tertiary hospital. The patients postoperative course was complicated by further recurrence of the hernia and ultimately she passed away from a VRE bacteraemia and due to overwhelming medical cormorbidities.

DISCUSSION: Hiatal hernias can be classified by type. The presence of the cardiac orifice in its normal anatomical position with protrusion of the fundus of the stomach through the oesophageal hiatus is constituted as a Type II para-oesophageal hernia. Concurrent migration of the gastro-oesophageal junction into the chest, indicates progression of the disorder to the more common Type III hiatal hernia. Type IV hernia denotes movement of another organ (often the transverse or sigmoid colon) into chest alongside the stomach. In our patient, there was herniation of the transverse colon into the chest, constituting a Type IV hiatal hernia.

Acute presentations of PEHs often manifest as obstruction, cardiorespiratory compromise and pain. They have been associated with a high risk of both mortality and morbidity. Initial management requires decompression of the herniated organ to reduce respiratory compromise, usually through use of a nasogastric tube.

There are a number of different surgical approaches to surgical repair of PEH and the approach taken is often based on the clinical scenario. Elective repair of PEH overall mortality is low for both laparoscopic and open repairs whether a transabdominal or transthoracic approach is used.

Our standard method to deal with large para-oesophageal hernias involves a laparoscopic approach with complete sac excision, reinforced closure of the crural defect and use of an antireflux procedure. Occasionally a gastrostomy tube is placed to act as both as a gastropepy as well as facilitating postoperative gastric drainage. The reduced stomach often fails to completely empty in the immediate postoperative period, causing patient discomfort and sometimes leading to vomiting, which can act as a diaphragmatic stressor which is

associated with worsened long-term outcomes. Incomplete stomach emptying can also limit post-operative nutrition. This standard repair may be contraindicated in the unstable emergency patient.

Our patient was considered to be too haemodynamically unstable for formal hernia repair. She was requiring greater amounts of inotropic after anaesthesia and pneumoperitoneum. Laparoscopy was attempted after initiation of inotropic support and did not have an adverse effect on the haemodynamic parameters. The stomach was inspected by both gastroscopy and by the laparoscope and was determined to be viable. Ideas of formal repair at this operation were abandoned. An anterior gastropepy (Boerma operation) was chosen as the preferred method of reduction, with the main intention of reducing the hernia, preventing postoperative respiratory compromise and preventing gastric ischemia.

In the procedure, the hernia was reduced from the chest by traction and minimal dissecting of the hernia sac from the mediastinum. The anterior aspect of the stomach was fixated to the anterior abdominal wall by use of a percutaneous endoscopic gastrostomy. Fixation can also be performed by the use of sutures.

Reherniation is a common complication of anterior gastropepy, due to the combination of a positive intraabdominal pressure and negative intrathoracic pressure. There is a lack of clinical trial data on rates of hernia recurrence when a gastropepy is used as part of a formal repair, but recurrence is certainly higher with gastropepy alone. There is a lack of data on the recurrence rates of hernias after Boerma gastropepy. This complication occurred in our patient. The more common complication reported in the literature is the risk of hiatal stenosis; particularly in the paediatric population. This did not occur in our case.

W.J Boerma described the anterior gastropepy procedure first in Holland due to its simplicity and effectiveness in difficult cases.

Reduction of the intrathoracic stomach below the oesophageal hiatus and transfixing the lesser curvature of the stomach to the anterior abdominal wall is described. By narrowing the acute angle and thus reducing reflux of gastric contents. As in our technique presence of a hiatal hernia is noted. Reduction of the intrathoracic stomach is conducted. Division of the triangular and falciform ligaments, freeing of the peritoneal attachments of the oesophagus and then placement of sutures via the lesser curvature of the stomach to the external aspect is advocated. The final product is putting the oesophagus and lesser curvature under tension,

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superior aspect of the linea alba rendered taught by the costal margins. We then note the lesser curvature against the inferior aspect of the liver.

Paraesophageal hernias are associated with a high incidence of complications which particularly include gastric volvulus, obstruction, and strangulation with perforation and upper gastro intestinal haemorrhage. In high risk situations the formal repair cannot occur and simple gastropexy is used.

Laparoscopic approach is generally used to omit the morbidity with upper midline laparotomy.

A significant problem with paraesophageal hernias is the herniated stomach can rotate around its longitudinal axis and causes organoaxial volvulus. Rotation can also occur around the transverse axis and cause mesentericgastric obstruction (thus strangulation, perforation, ulceration and subsequent haemorrhage).

Traditional hiatal repair is particularly difficult in the elderly whom are poor candidates for surgery. In these circumstances the decision of whether to transthoracic or transabdominal may be difficult.

CONCLUSION: In conclusion, in high risk emergent patients, the use of Borema gastropexy is recognized to be a simple and an effective technique. However there is a high hernia recurrence rate that can occur as depicted in our case and this may cause early complications. Use of anterior gastropexy is comparable to other surgical approaches in efficacy and complication rates. In large hernias repairs crural repair is tedious. By fixing the stomach to the anterior abdominal wall it helps seal the hiatus. While laparoscopic anterior gastropexy has a significant incidence of recurrent herniation, clinical results of this simple procedure supports its use as the initial surgical option in those unfit for major surgery.

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SESSION 7 FREE COMMUNICATIONS C / 1350-1400

VAGINAL HYSTERECTOMY – HOW EASY

Hamdorf, G

Without apologies I direct most of my comments to the younger Fellows of our College. My emphasis in this presentation is on technique and general hints concerning

vaginal surgery, in particular vaginal hysterectomy. There is no doubt that there has been deskilling associated with the training of our junior Fellows. For example the conflict with the interest and training in laparoscopic procedures since the early 1990s which has had a direct dilution effect on general gynaecological pelvic surgery available for our trainees. Secondly the availability of various conservative modalities for the management of dysfunctional bleeding for example has resulted in the reduced need for hysterectomies.

The literature certainly emphasises the safety and sensibility of vaginal hysterectomies in preference to all other techniques. Some points to emphasise with regard to the benefits of vaginal hysterectomy:

1. This is a classic minimally invasive technique.
2. It is a cheap and cost effective procedure.
3. It is relatively quick.
4. It results in decreased hospitalisation.
5. It has significant reduced morbidity.

Assuming all conservative approaches have been taken to avoid surgery I would then proceed to discuss:

1. The indications for vaginal hysterectomy and the features that would make vaginal surgery possible.
2. I would include helpful hints concerning all vaginal surgery, in particular relating to hysterectomies.
3. I would emphasise the techniques of the procedure which I have gleaned over many years of being a keen vaginal surgeon and would be very beneficial for young Fellows of the College.

I plan to have some still slides and a short video presentation of a vaginal hysterectomy. I would aim to talk through these slides and video to highlight techniques that I find very useful in performing vaginal hysterectomies.

In summary, I would attempt in the time allocated to cover:

1. Helpful hints concerning surgery.
2. Suturing techniques.
3. Retraction techniques and the use of assistants.
4. Ways to minimise problems with vaginal surgery.
5. Various morcellation techniques which would be helpful for the management of vaginal hysterectomies with a large uterus.

Finally, by address the slides and video presentation I would hope that this would adequately cover the relevant points in relation to vaginal hysterectomies and be informative to the audience.

AUTHOR AFFILIATION: G. Hamdorf; Royal Adelaide Hospital, North Terrace, Adelaide, South Australia, Australia.



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SESSION 7

FREE COMMUNICATIONS C / 1400-1410

DUAL (UTEROSACRAL AND SACROSPINOUS LIGAMENTS) VAGINAL VAULT SUPPORT AT COLPORRHAPHY - AN ANATOMICAL BASIS FOR A FOUR-PART VAGINAL REPAIR

Haylen B, Vu D, Birrell W, Vashevnik S, Tse K

OBJECTIVE: We aim to establish an anatomical argument for the simultaneous use of the uterosacral and sacrospinous ligaments to provide dual vaginal vault support at colporrhaphy. This is on the basis of: (A) the consideration of the top of the vagina as a 'vault' or an 'area' rather than as an 'apex' or a 'point' the former requiring wider or perhaps dual support; (B) the technical ability to use both ligaments concomitantly; (C) the different vectors through which these ligaments might synergize to provide that dual (and hopefully balanced) vaginal vault support;

BACKGROUND:

(A) The top of the vagina is termed¹ a 'vault' i.e. a 'continuous arch' covering the vagina rather than an 'apex' which is defined generically as 'the highest point'. Support to a 'vault' implies that more than one direction of support might be necessary, perhaps as a minimum, anterior and posterior vault support.

(B) Midline plication of the uterosacral ligaments simultaneous with anterior colporrhaphy has been recently described² as providing anterior Levels 1 and 2 vaginal support. Sacrospinous colpopexy and posterior colporrhaphy has long been used to provide posterior Levels 1 and 2 vaginal support. Dual vaginal vault support is technically possible but anatomically untested.

METHODS:

(C) A study was made of 13 formalized cadaver hemipelves in our collection of teaching prosections. None had undergone hysterectomy or obvious pelvic floor repair surgery. Four observers were involved in the studies. In all cases, observations were made to determine (i) the vector of anatomical support provided by (a) traction on the uterosacral ligaments at a level of the vaginal vault and (b) traction on the posterior vaginal vault towards the (right) sacrospinous ligament. Additional observations (ii) were made of which vaginal walls were subject to increased tension as a result of the above traction. Traction was by forceps or sutures

RESULTS:

A: Traction on the UTEROSACRAL ligaments caused a POSTERIOR AND SUPERIOR vector of tension on the ANTERIOR vaginal vault (and wall) with minimal or no

tension on the posterior vaginal vault (and wall).

B: Traction on the posterior vaginal wall (right side) towards the right SACROSPINOUS ligament caused a POSTERIOR AND SUPERIOR vector of tension on the POSTERIOR vaginal vault (and wall) with minimal or no tension on the anterior vaginal vault (and wall). To a certain degree, it may be slightly lateral, dependent on the area of attachment of the supportive suture(s) to the ligament.

C: Traction on both the UTEROSACRAL ligaments and traction on the posterior vaginal vault towards the SACROSPINOUS ligament created tension in both anterior and posterior vaginal walls and a more balanced elevation of the vaginal vault. Traction on the sacrospinous ligament was infero-lateral to that of by the uterosacral ligament

CONCLUSIONS:

1. DUAL UTEROSACRAL AND SACROSPINOUS LIGAMENT TRACTION is technically possible to provide DUAL anterior and posterior support to the vaginal vault at colporrhaphy (anterior and posterior).
2. This dual vaginal vault support, POSTERIOR AND SUPERIOR (uterosacral) and also POSTERIOR AND SUPERIOR (sacrospinous) appears balanced and assist in providing effective vaginal vault (and wall) support.
3. The use of anterior and posterior colporrhaphies and combined uterosacral and sacrospinous ligament support to the anterior and posterior aspects of the vaginal vault creates a FOUR-PART VAGINAL REPAIR not previously described.

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SESSION 7

FREE COMMUNICATIONS C / 1410-1420

THE RETROVERTED UTERUS: A HISTORY AND PELVIC FLOOR ORIENTED PERSPECTIVE

Haylen B, Vandeville B

OBJECTIVE: To examine all available publications on the retroverted uterus to develop a detailed history and its interrelation with conclusions relevant to the area of pelvic floor function and dysfunction.

BACKGROUND: Medline and Embase databases extending

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back indefinitely and any other references on the retroverted uterus derived from those or any other sources.

METHODS: The limited number of articles relevant to any specific section prevented the development of specific selection criteria.

RESULTS: The retroverted uterus has a long, rich and interesting history with significant interruptions in reporting. This history dates back to Hippocrates (400BC) with more active history in the 1500's, 1700's, 1800's and early 1900's.

The most relevant contemporary classification is anatomical according to the presence or absence of retroversion and whether retroflexion is additionally present.

Its aetiology is more likely to be developmental with a limited acquired component, though this aspect requires more research. Accurate diagnosis is best with the use of transvaginal ultrasound and an empty bladder. Its prevalence is approximately 16-18% (1 in 6) women, increasing significantly (1 in 3), in the presence of symptoms of pelvic floor dysfunction, particularly prolapse.

The main significant association is that with uterine and, to a degree, certain forms of vaginal prolapse with no significant association with the other diagnoses of pelvic floor dysfunction.

Both obstetric and gynecological episodes of acute urinary retention associated with the retroverted uterus have been published throughout its history. Less dramatic chronic, sometimes cyclical symptoms of voiding and defecatory dysfunction, associated with the same entity, have also been recorded.

Uterine retroversion most commonly is asymptomatic and requires no treatment. In symptomatic (non-prolapse) cases, a 'good' trial of conservative measures should generally precede any thoughts of surgical management, generally by ventrosuspension. A prolapsed retroverted uterus, especially if associated with vaginal prolapse, may require surgical management.

More research is required on most aspects of the retroverted uterus, an important aspect of urogynecological and general gynecological practice

CONCLUSIONS: Uterine retroversion is common in women, has a long, interesting history and has associations with pelvic organ prolapse, and less particularly, voiding and defecatory dysfunctions. Knowledge of the retroverted

uterus is an important and to date underrated aspect of urogynaecology.

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SESSION 7 FREE COMMUNICATIONS C / 1420-1430

IS TOTAL HYSTERECTOMY AT THE TIME OF LAPAROSCOPIC MESH SACRAL PROMONTOFIXATION A RISK FACTOR FOR MESH EROSION?

Patel PS, Lam A

OBJECTIVE: To compare the outcomes of laparoscopic sacrocolpopexy (LSC) with laparoscopic sacrohysteropexy (LSH) for Level I prolapse.

METHODS: A prospective cohort study was conducted on all consecutive women who underwent LSC or LSH by a single surgeon at a university-affiliated tertiary referral centre between November 2004 and December 2010. Success was evaluated subjectively based on patients' answers to standardised questions, and objectively using the pelvic organ prolapse quantification (POP-Q) scale.

RESULTS: 233 consecutive patients underwent a LSH (n=69) or a LSC (n=164) using Gynemesh®. The LSC group was older (mean difference 9.1 years, P<0.001), and had a significantly higher proportion of menopausal women (82.9% vs. 59.4%, P<0.001) with recurrent prolapse (65.8% vs. 26.5%, P<0.001). There were no differences in BMI, parity, sexual activity or overall baseline POP-Q Stage.

Concurrent prolapse repairs were performed in 84% and 66% of LSH and LSC cases respectively, with the LSH group having higher estimated blood loss (mean difference 25 mL, P=0.010). There were no differences in total operative duration or complication rates.

At an average of 20 months, there was no difference in the objective Level I cure rate (97.8%), re-operation rates, or subjective symptom resolution rates, but mesh erosions were more common in the LSC group (6.2% vs. 0%, P=0.036), diagnosed at a median of 12 months (range 2 – 66).

Women who underwent a concurrent total hysterectomy (TH) were more likely to experience mesh erosions than those who had a healed vault at the time of their LSC



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(26.3% vs. 3.0%, $P=0.002$), or those who were having a LSH ($P<0.001$). Those who underwent a subtotal hysterectomy had fewer erosions (9.1%) than the TH subgroup, but the difference did not reach statistical significance.

The only independent risk factor for mesh erosion was a concurrent TH (RR of 8.7; 95% CI 2.2-36.1). In patients undergoing a concurrent hysterectomy, there was a non-significant tendency for mesh exposures to occur earlier (at a median of 5 vs. 18 months), be located at the apex (100 vs. 50%), and need surgical excision (67% vs. 25%).

CONCLUSIONS: Women considering laparoscopic mesh sacral promontofixation who wish to preserve their uterus can be advised that LSH is as effective and safe a procedure as the LSC, and is associated with significantly fewer mesh erosions compared to LSC performed at the time of a total hysterectomy.

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SESSION 7 FREE COMMUNICATIONS C / 1430-1440

LAPAROSCOPIC MESH SACROCOLPOPEXY FOR RECURRENT NEOVAGINAL PROLAPSE AFTER MALE-TO-FEMALE GENDER REASSIGNMENT

Patel PS, Lam A

The true incidence of prolapse of the neovagina after male-to-female gender reassignment surgery is unknown.

We present a case of laparoscopic mesh sacrocolpopexy in a 58 year old transsexual with recurrent vaginal prolapse and multiple previous laparotomies. The video illustrates the differences in anatomy of the male pelvis and the principles of laparoscopic mesh sacrocolpopexy.

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