UROGYNAECOLOGY

0064
Female genital congenital anomaly in Dr Soetomo General Hospital, Surabaya, Indonesia 2013–2016
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Introduction: Female genital congenital anomalies tend to increase. These anomalies may lead to abnormalities of menstrual and reproductive function even ambiguous social identity. Prevalence of female genital congenital anomalies in population was 4–7% . Yet, there is still lacking of data in our center about these anomalies.

Objective: Our study aimed to determine incidence, socio-demographic characteristics, type and therapy of female congenital genitalia anomaly patients in gynecology outpatient clinic Dr Soetomo General Hospital Surabaya Indonesia.

Methods: This cross-sectional study was conducted to 80 cases of female congenital genitalia anomaly in Dr Soetomo General Hospital Surabaya Indonesia from January 2013 to December 2016. Data was showed descriptively.

Results: We found 80 cases of female congenital genitalia anomaly from 3082 gynecology outpatient clinic within 4 years. The mean age of patients was 19.73 ± 9.37 year old. The mean age of menarche was 14.28 ± 2.02 year old. The mean marital age was 23.72 ± 4.75 years old. Sixty-two percent of patients were not yet married. The most cases were vaginal agenesis (30 %), followed by the vaginal septum (25 %), hymen imperforate (8.75 %), clitoromegaly (8.75 %) and others (27.5 %). Most of the cases were managed by surgical therapy (82.5 %) majority transvaginal surgery (87.8 %) with the most commonly used was neovagina with 2 technique amnion and sigmoid (25 %). Two cases suffered recurrent after surgical treatment then we did second surgical therapy, hysterectomy. Bleeding as the complication of therapy was only in 3 % of patients.

Conclusions: Female congenital genitalia anomalies at Dr Soetomo General Hospital were dominated by vaginal agenesis with the most therapy used was neovagina with 2 technique amnion and sigmoid. There were two recurrent cases and three percent minimal bleeding complication.

Keywords: Female genital congenital anomaly, Congenital anomaly, Dr Soetomo General Hospital.

0101
A case report: vaginal cystolithotomy on a patient with pelvic organ prolapse and multiple vesical calculi
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Vesical calculi are not commonly seen with pelvic organ prolapse. We report a case of a 64 years old multiparous female, who presented with history of vaginal mass in the last 2 years. Gritty sensation was felt on palpating the cystocele and multiple calculi were suspected intraoperatively. A transvaginal hysterectomy was done followed by vaginal cystolithotomy, an anterior colporrhaphy and posterior colpoperineorrhaphy. Multiple vesicle calculus was removed. Post-operative course was unremarkable.

Keywords: Vesical calculi, pelvic organ prolapse, vaginal cystolithotomy.

0126
Using practical and dynamic models to teach and practice pelvic organ prolapse quantification (POP-Q) exam to residents of gynecology
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Background: Pelvic organ prolapse (POP) is often crudely diagnosed between practitioners due to the possible lack in accepted system in grading. In 1996, International Continence Society standardized the terminology with Pelvic Organ Prolapse Quantification System (POP-Q). Although already an international standard in the evaluation of pelvic organ prolapse, it is perceived to be difficult to learn by most.

Objective: This study aims to use a practical and dynamic model and make a simple and intuitive way to teach and practice POP-Q scoring.

Methods: This is a prospective observational study involving volunteer Gynecology residents. They underwent a 15-minute lecture given by a consultant of Urogynecology introducing the POP-Q system. It was followed by a hands-on workshop using a dynamic tool made from a marked sock placed in a cardboard tube. A 10-point questionnaire given before and after the activity measured objective change in the understanding and knowledge on POP-Q system. A self-assessment
questionnaire involving a 5-point Likert scale measured subjective change in understanding, perceived difficulty and comfort in performing POP-Q.

**Results:** A total of 28 residents of Gynecology in all year levels participated. A statistically significant increase from a mean baseline score of 5.36 ± 2.04 to a post-session score of 9.07 ± 1.30 was noted from the 10-point questionnaire. Using the self-assessment questionnaire, 27 participants (96.4%) reported increase of scores in their knowledge, perceived difficulty, comfort performing, and confidence in teaching the POP-Q. Twenty six (93%) participants also rated for the teaching model to be a “very good” and “excellent” learning aid in learning POP-Q.

**Conclusion:** The use of a teaching model made from a marked sock supported by cardboard tubing is an effective and affordable option to teach POP-Q system. It increased understanding of basic concepts on POP-Q and improved confidence on performing POP-Q on actual patients.

**0127**

Prospective evaluation of overactive bladder symptoms in a cohort of patients undergoing vaginal hysterectomy and anterior colporrhaphy for advanced pelvic organ prolapse

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**Background:** Pelvic organ prolapse (POP) is often accompanied by bothersome symptoms of overactive bladder (OAB) namely urinary frequency, urgency, nocturia and urgency incontinence. Improvement of OAB related symptoms have been observed after resolution of prolapse in literature but the results are difficult to interpret due to the wide variety of patient population and surgical techniques analyzed.

**Objective:** This study aims to evaluate the impact of surgery on the improvement of OAB symptoms on a homogenous cohort of patients undergoing vaginal hysterectomy and colporrhaphy for POP.

**Method:** This is a prospective observational study on patients with POP and OAB who underwent vaginal hysterectomy and colporrhaphy for advanced stage POP in a tertiary referral center. Objective change in OAB symptom bother was measured using a 3-day bladder diary and an office cystometry while subjective change in the quality of life was measured through the Overactive Bladder-Validated 8-question Awareness Tool (OAB V-8) done before and 6 weeks after surgery.

**Results:** A total of 43 patients were included for analysis. Ninety-three percent (*n* = 40) of the participants were defined to have “improved” and none had “persistent” OAB symptoms. A statistically significant improvement in the OAB-V8 score was noted from a mean decrease of 20.47 ± 6.70 to 5.09 ± 4.06 after surgery. A decrease in the average number of daytime voids and an increase in the average volume per void were noted in the 3-day diary. In the filling cystometry, there was an increase in the mean volumes of the first, strong and maximum bladder capacity with no patient developing retention and de novo-stress urinary incontinence.

**Conclusion:** This study proves that patients suffering from advanced staged POP and OAB experience significant resolution of OAB symptoms after vaginal hysterectomy and anterior colporrhaphy. This information can be utilized in counseling patients regarding the high likelihood of OAB symptom resolution following prolapse repair.

**0163**

The management of overactive bladder in the elderly and anticholinergic burden - what to do?

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The cumulative effect of taking one or more medicines with anticholinergic properties is referred to as the anticholinergic burden (ACB). This is of concern since the benefit of anticholinergic drugs in the elderly may potentially be outweighed by the risk of adverse drug events when summated, including risk of mortality. It is not clear how many physicians, particularly outside the specialty of elderly care, actually consider the ACB when prescribing drugs. The options of the management of overactive bladder in the elderly will be discussed with reference to minimising risk to the patient.

**0208**

Genitourinary fistulae from pressure necrosis: a case series

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**Introduction:** Genitourinary fistulae remain a devastating consequence of obstructed labor and pelvic surgery in developing countries.

**Objectives:** This paper presents 2 cases of genitourinary fistulae from pressure necrosis and describes the mechanisms in which they occur.
Cases: The first is a vesicovaginal fistula in a 28-year old primigravid who had obstructed labor for 3 days. She delivered vaginally to a stillborn male and underwent a hysterectomy for uterine atony. She developed a 3 × 2 cm vesicovaginal fistula at the mid-urethra, episiotomy site dehiscence, fecal incontinence and foot drop during the postpartum. She was for delayed repair of the fistula. The second is a 47-year old multipara with a six-month history of an 8 × 7 cm prolapsed submucous myoma. A 1 × 1 cm urethrovaginal fistula at the distal third of the anterior vaginal wall was seen and repaired by an advancement flap and meatoplasty.

Both patients developed fistulae from pressure necrosis. One was due to prolonged fetal head impaction in the pelvis resulting to necrosis in the intervening soft tissue and the other from a chronically lodged myoma passively exerting pressure on the vagina.

Our first patient is a reproductive-aged primipara, a profile consistent with obstetric fistulae patients in literature. The second is a multiparous perimenopausal woman with suboptimal quality of tissue from repeated deliveries. Estrogen insufficiency in the perimenopause causes decreased blood flow to the urogenital tissues, rendering them prone to the effects of hypoxia.

Conclusion: The two cases illustrate that regardless of age, parity or course of progression, any mass that exerts undue pressure on pelvic structures can cause a genitourinary fistula from pressure necrosis.

0209
Outcomes of continence surgery among women with stress urinary incontinence in a Philippine tertiary referral center
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Introduction: The goal of any continence surgery is long-term continence and low complication rates.

Objectives: This study aims to measure continence rates and quality of life (QOL) at least one year after continence surgery in a tertiary referral center.

Methodology: This is a retrospective cohort study of 49 patients operated on for stress urinary incontinence from 2010 to 2014. They were divided into: Burch colposuspension (BC) (n = 8), pubovaginal sling (PVS) (n = 22) and mid-urethral sling (MUS) (n = 19) surgeries. Objective continence rate was measured using a cough stress test (CST) and a pad weight test. QOL was measured through the Urogenital Distress Inventory (UDI-6) and the Incontinence Impact Questionnaire (IIQ-7).

Results: Cough stress test was negative for 100 % of patients in the BC and MUS groups and in 90.9 % in the PVS group. Pad weight test was negative for 100 % in the BC group, 86.4 % in the PVS group and 94.7 % in the MUS group. These measures were not statistically significant.

In the UDI-6 questionnaire, BC and MUS patients showed less irritative and obstructive urinary symptoms. Most of the patients in these 2 groups remained totally continent with no discomfort on urination.

In the IIQ-7 questionnaire, most BC and MUS patients showed a negative impact of incontinence on physical activity and ability to travel. All patients in the three groups did not complain of a negative impact of incontinence on their social relationships nor on their emotional status. No significant difference was seen in all of these factors across the types of surgery.

Conclusion: The continence rate and QOL measures in women who underwent continence surgery show good results and better outcomes with Burch colposuspension and mid-urethral slings.

0224
Acupuncture and clomiphene interventions in PCOS conversely affect the insulin resistance profiles in early pregnancy subjects: a secondary analysis of a randomized controlled trial
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Introduction: Little is known, however, whether acupuncture and clomiphene have an influence on metabolism profiles (glucose, TG, HOMA-IR) in women with polycystic ovary syndrome.

Objective: To evaluate the effect of clomiphene citrate (CC) and acupuncture intervention on glycolipid profiles in women with polycystic ovary syndrome (PCOS).

Methodology/process: This was a post hoc data analysis of subjects in PCOSAct Trial. We enrolled women with polycystic ovary syndrome in a multicenter, randomized trial. 1000 women were randomly assigned to four groups (True acupuncture combined with CC, Sham acupuncture combined with CC, True acupuncture combined with CC placebo, Sham acupuncture combined with CC placebo). Physical examination
parameters, glucose and lipid metabolism relevant parameters were measured before and after treatment. **Results/outcomes:** Acupuncture active or control was associated with a significantly within-group reduction in weight and BMI. Only active acupuncture resulted in a significant reduction in circumferences of hip and waist.

In conceived and all subjects, higher fasting insulin level and HOMA-IR were associated with previous CC usage in Group B, and lower glucose level and HOMA were associated with active acupuncture in Group C by their within-group comparisons. For conceived subjects, active acupuncture was associated with in a significant reduction in Triglyceride during early pregnancy. In conceived and all subjects, higher fasting insulin level and Apoprotein A within-group, thus lower ratios in LDL-C/HDL-C and Apo B/Apo A.

**Conclusion(s):** The property of ovary stimulation by Clomiphene is reflected off the altered ratio of LDL-C/ HDL-C and their transport proteins as substrates for steroid productions, but is complicated with elevated fasting insulin levels and insulin resistance once conceived. Active acupuncture contributes significantly to lose weight and improve glycometabolism (glucose/TG) in women with PCOS after pregnancy.

**Keywords:** Glycometabolism, Lipid metabolism, Polycystic ovary syndrome, BMI, Acupuncture, Clomiphene citrate.

0244 Outcome of women who received laparoscopic surgery for pelvic organ prolapse

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**Introduction:** Laparoscopic sacrocolpexy (LapSC) or hysterocolpocapyrexy (LapHSC) are surgical options for pelvic organ prolapse. LapSC was performed for woman with vaginal vault prolapse. In woman with stage III/IV uterine prolapse, younger age and sexually active, vaginal hysterectomy with concomitant LapSC (VH + LapSC) was offered. LapHSC was offered if women requested for uterine preservation.

**Objective:** To review the peri-operative complications and outcome of LapSC or LapHSC.

**Methodology:** This is an analysis of a prospectively collected database. Demographic data, symptoms and POPQ before operations, operative and peri-operative information were reviewed. Post-operatively, women were followed-up in 3–4 months and then annually till 5 years. Symptoms, POPQ and subjective satisfaction on the surgery were assessed. Recurrence of prolapse was defined as ≥ stage II prolapse. If a woman had received operation for the recurrence, the findings before that surgery were regarded as the outcome of that woman.

**Results:** 126 women received one of the three types of surgery; 19 women who had robotic-assisted lapSC were excluded. There were low peri-operative complication rates. Four women had the operation within 3 months of this report, no follow-up data was available. The mean follow-up duration was 20–43 months. Overall, 15.6 %, 4.2 % and 7.1 % who had LapSC, VH + LapSC and LapHSC, respectively, had recurrence of prolapse. And 23.8 %, 16.7 % and 20 %, respectively, had de novo stress urinary incontinence. However, only 2 and 4 women required re-operation for prolapse or stress incontinence. 9.1 % of women in VH + LapSC group had mesh exposure; and 4.5 % required out-patient excision of exposed part of mesh. The overall patient’s satisfaction rate for all three operations was good.

**Conclusion:** LapSC, VH and LapSC, and LapHSC are treatment options for women with vaginal vault prolapse or uterine prolapse. There were low peri-operative complications and re-operation rate. Overall patient’s satisfaction was high. However, long term result is needed.

0317 The effect of trans-vaginal implanted collagen-coated and non-coated polypropylene meshes in urological and immunohistochemical evaluation - a rat model

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**Introduction:** Lower urinary tract symptoms (LUTS) and inflammatory reaction may occur after mesh implantation. The cytokines, such as the IL-1, TNF-α, NGF and MMPs may trigger.

**Aims:** To study the immunohistochemical responses towards the polypropylene meshes with and without collagen coating, implanted in the pelvic wall of the rats and their relationship with urodynamic investigation.

**Methods:** 42 female Sprague–Dawley divided into 7 groups of 6 rats each; Control, Sham for 7-days, Sham for 30-days, MPC-rats implanted with Avaulta for 7-days, MPC for 30-days, MP-rat implanted with Perigee for 7-days and MP for 30-days. The rats were sacrificed
on Day-7 and Day-30. The outcomes measured were the inflammatory reaction, the density of IL-1, TNF-α, NGF and MMP-2 and their association with urodynamics.

**Results:** Intense inflammatory reaction on Day-7 in the meshes groups which decreased on Day-30. MPC showed a larger area of inflammation as compared to MP (p < 0.001). IL-1, TNF-α and MMP-2 were observed to decrease from Day-7 to Day-30 in MP and MPC groups but the level in MPC remained high. The NGF returned towards normal level on Day-30 in all groups. The UD evaluation showed no difference in the voiding pressure (VP) between the groups on day 7 and Day 30. Both the Study and Sham groups had a shorter voiding interval (VI) on Day-7 with significantly lower VI in MPC. The VI had significantly increased on Day-30 in all groups but lower in the meshes when compared to sham and control groups. Meanwhile, the voided volume was significantly lower in the mesh groups as compared to the sham even when an increase was seen on day 30 post-operation.

**Conclusions:** Higher level of IL-1, TNF-α and MMP-2 in early days post-transvaginal mesh implantation is associated with the post-operative LUTS especially in the collagen-coated polypropylene mesh group.

0318

Sacrosinous ligament fixation for hysteropexy: does concomitant anterior and posterior fixation improve surgical outcome?

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**Introduction:** Uterine preservation with sacrospinous ligament fixation for hysteropexy (SSH) in uterine prolapse is an option for women who had extensive pelvic reconstructive surgery (PRS) for pelvic organ prolapse (POP). Risk factor for voiding dysfunction following extensive pelvic reconstructive surgery

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**Introduction:** Identifying risk factors could improve counselling and allows surgeon to modify approach and optimize the outcome.

**Objective:** The objective was to identify the predictors for post-operative voiding dysfunction (PVD) among women who had extensive pelvic reconstructive surgery (PRS) for pelvic organ prolapse (POP).

**Methods:** 1425 women who underwent PRS from 2006 to 2014 were enrolled. Inclusion criteria were women with prolapse POP-Q stage ≥III. Standard pre- and post-operative evaluations were performed. The follow-up evaluations were scheduled at 1 week, 1–3 months, 6 months, and annually thereafter along with history taking, pelvic examination and quality of life questionnaires. Urodynamics was performed between 6 months to 1 year post-operatively. The definition on PVD was post-void residuals (PVR) > 50 ml or 20 % of post-void and/or reported incomplete micturition in

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POPD-6 Question 5 with answer 3 (moderate) and 4 (quite a bit).

**Results:** 54 patients were excluded due to data incomplete. 1017 of 1371 (74.2 %) women had TVM and 247 (18 %) had concomitant MUS. 380 (27.7 %) had pre-operative voiding dysfunction of which 9.7 % (37/380) had persistent voiding dysfunction post-operatively. 991 (72.3 %) had normal pre-operative voiding dysfunction of which 1.1 % (11/991) had de nova voiding dysfunction post-operatively. The overall incidence of PVD was 3.5 % (48/1371). Those with concomitant MUS were at higher risk of developing PVD; OR: 3.12. DM, pre-operative Dmax 10 cmH2O and PVR ≥ 200 ml hold a significant higher risk of developing PVD with OR: 3.07, 1.87 and 2.15 respectively. Age, Parity, BMI, Menopause, Uterus preserve, type of TVM used and FUL were not found to be related to the developing of PVD.

**Conclusion:** DM, MUS surgery, Dmax 10 cmH2O and post-operative residual urine ≥200 ml were the risk factors for patients with advanced POP to develop post-operative voiding dysfunction after pelvic reconstructive surgery.

0328

Five year follow up study of MiniArc Single incision sling for primary urodynamic stress incontinence

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**Introduction:** Single-incision sling (SIS), MiniArc, which has showed a good short-term outcomes and long-term report was lacking.

**Objective:** This study was to evaluate the long-term efficacy and safety of MiniArc over 5 years for treatment of primary urodynamic stress incontinence (USI).

**Methods:** From 2010 to 2011, patients with USI without concurrent procedures were enrolled. Preoperative evaluation was as standard urogynecological protocol. Subjective assessment used validated questionnaires. Objective cure of SUI was the absence of demonstrable urine leakage on provocative filling cystometry and 1-hour pad test <2 grams. Subjective cure was negative response to UDI-6 Question-3. De novo urgency was an assessment index score ≥ 1 on UDI-6 Question-2 and/or urgency symptoms reported in the bladder diary. The MiniArc procedure was performed in standard with no additional procedure. Urodynamics was performed at 1 and 3 years post-operatively. At 5 years, patients were objectively evaluated with a pad test.

**Results:** 60 patients were included. Subjective and objective cure was 80.8 % and 84.6 % at the 5th post-operative year. 58.3 % were post-menopausal and 13.3 % had prior pelvic surgeries. The operative procedure was short (23.5 + 7.1 minutes). Intraoperative blood loss was very minimal (25.5 + 27.6 ml). No major complications and mesh extrusions were noted post-operatively. 1-hour pad test showed statistical improvement at 1, 3 and 5 years follow-up. De novo DO and DOI were noted in 3 patients (5.4 %) at 1 and 3 years. None of the patients developed bladder outlet obstruction (BOO). Subjective assessment on the quality of life of patients through the use of questionnaires at 5 years post-operation was improved. Throughout 5 years, a step ladder decline in the trend of cure was observed yet cumulative rates were maintained at 80 %.

**Conclusion:** SIS, MiniArc, maintains its effectiveness and safety in treatment of SUI through 5-years with high objective and subjective cure rates with low incidence of complications.

0341

Causes of Juxta-cervical fistula and difficulties during repair: 46 cases

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**Introduction:** Genitourinary fistula in the region of the cervix is called juxta-cervical fistula. Here lateral dissection towards cervix must be done cautiously to avoid ureteric injury.

**Objectives:** To find out the causes of juxta-cervical fistula and difficulties faced during repair.

**Methods and Materials:** 46 cases in Bangladesh are reviewed. Study period was January 2012 to January 2017. Before operation detailed history, examination and evaluation was done. Sometimes the final diagnosis and surgical plan was decided just preceding the operation under anesthesia. Fistula involving the urethra/bladder neck up to cervix are excluded in this study.

**Result:** Among 46 cases, 42 were due to obstetric causes, of which 7 were related with caesarean section. Rest 4 were iatrogenic but other than obstetric-gynecological causes. 44 patients were repaired vaginally and 2 through abdominally. Difficulties during surgery were: identification of fistula, assessment of size of fistula (a tiny fistula after dissection found larger), distorted anatomy e.g. displaced external cervical os (12 cases) or avulsed anterior cervical lip (13 cases), ureteric orifices
at the fistula margin (7 cases), also difficulty in exposure, dissection & separation, some had unhealthy cervix. Both primary and final closure rate was 97.82% (45 cases) with negligible complication. Only 1 (2.28%) case failed. One patient developed vaginal and cervical stenosis.

**Conclusion:** Although there might be difficulties during repair of juxta-cervical fistula but these can be overcome with careful pre-operative evaluation and appropriate surgical technique.

0374

**A case report: obstetric ureterouterine and gynecology ureterovaginalis fistula**
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Ureterouterine and ureterovaginal fistulas are rare complications of obstetric and gynecologic surgery. Ureterouterine fistula due to caesarean section may be caused by attempts to achieve hemostasis or too lateral a low transverse incision of the uterus, which probably results in ureteral damage. Ureterovaginal fistulas commonly result as a complication of hysterectomy. Other less common causes include pelvic trauma and irradiation of pelvic neoplasms. The subject of our interest is both of the ureter fistulas (the obstetric ureterouterine fistula and the gynecology ureterovaginal fistula), both can be repaired with a similar surgery technique i.e Lich Gregoir ureteroneocystectomy.

**Key words:** Ureterouterine fistula, ureterovaginal fistula, cesarean section, hysterectomy.