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(Y20)



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**The surgical outcomes and risk factors for failure of Mid-urethral sling surgeries in elderly and old age women with urodynamic stress incontinence**

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**BACKGROUND:** To study the surgical outcomes and risk factors for failure of three types of mid urethral slings (MUS) surgeries in elderly and old age women with urodynamic stress incontinence (USI).

**Materials and methods:** Three types of MUS surgeries {single incision sling (SIS) -Solyx, MiniArc, trans-obturator tape (TOT)-Monarc, retro-public mid-urethral sling (MUS-r)-tension-free vagina tape (TVT)} were performed amongst three age groups of women (young <64yr, elderly 65-74yr and old >75yr) with USI. They were followed up for one year to study the subjective and objective cure rates.

**RESULTS:** Complete postoperative data was available for 688 women. Overall objective cure rate was 88.2% and subjective cure rate was 85.9% at the end of one year follow up. Objective cure rates were 91.0%, 80.6%, 66.7% and subjective cure rates were 89.2%, 77.6%, 58.3% among young, elderly and old age women respectively. Both objective and subjective cure rates were significantly lower among old age group compared to younger women whilst only objective cure rates were significantly lower in elderly group when compared to younger women. Urodynamic parameters demonstrated flow rate, higher post-void bladder residual (PVR), smaller cystometric capacity (CC) and lower maximum urethral closure pressure (MUCP) were significantly lower among old and elderly group when compared to younger group. Subjectively, urinary distress inventory-6 (UDI-6) and incontinence impact questionnaire-7 (IIQ-7) improved significantly in all groups with significant changes from baseline only in older women. Intrinsic sphincter deficiency (ISD) was found to be significantly associated with failure in older women. Other preoperative comorbidities were equally distributed among all the three age groups. The operative time, perioperative complications, and length of hospital stay showed no difference between the study groups.

**CONCLUSIONS:** MUS surgery is safe for the young and aging patients with USI and demonstrated significant improvement in its outcomes, but both the objective and subjective cure rates decreases with age. ISD was also found to be significantly associated with failure.

*Wei-Che Lo* 羅偉哲  
(Y21)



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Dissecting of the paravesical space associated with lower urinary tract  
dysfunction – a rat model

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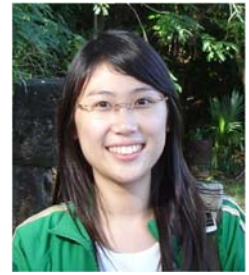
**Objective:** To determine the association of opening the paravesical space in relation to its occurrence of de novo SUI in an animal model.

**Materials and Methods:** Thirty five female Sprague Dawley rats were divided into 5 groups of 7 rats each: Control group, Sham groups(F,H), and Study groups(MF,MH). Groups labeled with "F" had the paravesical space opened, "H" had tissue dissection with no opening of the space, and "M" had mesh implanted inside the vaginal wall. Urodynamic studies, immunohistochemical analysis, and western blot were done at day40.

**Results:** The mean weight and age of 35 rats were  $302.1 \pm 25.1$  grams and  $12.8 \pm 1.2$  weeks old. No significant differences were noted among the control, Sham F, Sham H, Study MF, and Study MH on the voiding pressure and voided volume. The Sham F and Study MF (opened paravesical space) groups had significantly lower values on leak point pressures (LPP) ( $p=0.026$ ;  $p<0.001$ ) and shorter voiding intervals ( $p=0.032$ ;  $p=0.005$ ) when compared to other groups. Immunohistochemical analysis showed IL-1 and TNF- $\alpha$  to be intensely increased for the Study MF group ( $p=0.003$ ;  $p<0.001$ ). MMP-2 and CD 31 markers were also significantly higher in the Study MH and MF group. NGF expression was significantly increased in the Study MF and Sham F groups.

**Conclusion:** The opening of the paravesical space causes an increased inflammatory reaction, which leads to tissue destruction and lower urinary tract dysfunction, exemplified in the study with low leak point pressure and shortened voiding intervals.

*Li-Chun Chiu* 邱俐珺  
(Y22)



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**Urodynamics mixed type urinary incontinence with advanced pelvic organ prolapse, management and outcomes**

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**BACKGROUND:** Patients with pelvic organ prolapse (POP) often have accompanying lower urinary tract symptoms. Symptoms such as stress urinary incontinence(SUI-UD) and detrusor overactivity(DO) would co-exist in a number of patients. Management entails relieving the obstructive element.

**METHODS:** To determine the clinical outcome of patients with urodynamics mixed type urinary incontinence(MUI-U) after vaginal pelvic reconstructive surgery(PRS), a retrospective study was conducted. MUI-U was defined as having urodynamic findings of both of DO/DOI (detrusor overactivity incontinence) and SUI-UD. Main outcome measures: Objective cure-absence of involuntary detrusor contraction on filling cystometry and no demonstrable leakage of urine during increased abdominal pressure; Subjective cure- assessment index score of <1 on UDI-6 question #2 and #3.

**RESULTS:** Of the 82 patients evaluated, 14 underwent vaginal PRS with concomitant mid-urethral sling (MUS) insertion while 68 had vaginal PRS alone. Pre-operatively, 49(60%) patients had stage III and 33(40%) had stage IV prolapse. Post-operatively, 1-year data shows an objective cure of 56% (46/82) and subjective cure of 54% (44/82). MUI-U was significantly improved. Improvement of SUIUD and results of the 1-hour pad test were more pronounced in patients with concomitant MUS insertion.

**CONCLUSIONS:** Vaginal PRS cures symptoms of MUI-U in >50% of patients and concomitant MUS can be offered to SUI predominant MUI.

# Ying-Yu Chen 陳盈佑 (Y23)



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## Estrogen treatment in recurrent urinary tract infection: a meta-analysis of randomized controlled trials

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**BACKGROUND:** The aim of this study is to evaluate efficacy of estrogen treatment to recurrent urinary tract infection (rUTI) in postmenopausal women.

**METHODS:** A systemic review and meta-analysis of estrogen from different route of administration was conducted. Pubmed, Google scholar, Medline, Embase, and the Cochrane Library were searched to October 2019 for English language citations. Two reviewers selected randomized controlled trials (RCT) that met the inclusion criteria.

**RESULTS:** We identified 5235 records and included 5 RCTs with data for 348 patients. Vaginal estrogen showed preventing UTI recurrence (3 trials, sample size 236, RR 0.45, 95% CI 0.27-0.76, P= 0.003). However, oral estrogen showed no significance in decreasing recurrent UTI incidence compared to placebo (2 trials, sample size 112, RR 1.10, 95% CI 0.78-1.56, P= 0.58). Besides, estrogen usage decreased vaginal pH (2 trials, sample size 123, RR -1.98, 95% CI -2.96-(-1.00), P< 0.0001).

**CONCLUSIONS:** Vaginal estrogen decreased the incidence of recurrent UTI. There was no significant difference over oral estrogen to placebo. Estrogen usage, both vaginal and oral way, decreased vaginal pH.

# Yu-Min Chou 周鈺敏 (Y24)



## Sacrospinous ligament fixation for pelvic organ prolapse— Ten years' experience in KCGMH

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**Introduction:** Sacrospinous ligament fixation is a traditional vaginal pelvic reconstruction surgery using native tissue repair for pelvic organ prolapse. It plays a role again because of concerning for mesh-related complication. We analyzed our cases who received sacrospinous ligament fixation to evaluate the recurrence rate and complication rate.

**Method:** We retrospectively review the medical records of our patients who received transvaginal sacrospinous ligament fixation during 2008-2019. The definition of recurrence is POP-Q stage greater than stage 2.

**Result:** There are total 89 cases enrolled. Sixteen cases (18%) received concomitant hysterectomy and 50 cases (56.2%) received concomitant anti-incontinence surgery. Nine cases (10.1%) had received mesh-containing reconstruction before. Recurrence occurred in 16 cases. The recurrence rate is 17.9%. The average time to recurrence is 18.4 months. Eight cases (50%) receiving second surgery for pelvic reconstruction, and all of them use transvaginal artificial mesh. Six cases (37.5%) kept observation and one case (6.2%) use pessary for symptom relief.

One case (6.2%) lost follow-up after recurrence. All of the postoperative adverse events could be treated with conservative treatment or subsided with observation. The most common complication is buttock pain (14.6%). The second most complication is urinary tract infection (9.0%). Stitch exposure rate is 7.9% and none of them need stitch removal under anesthesia.

Concomitant hysterectomy is risk factor ( $p=0.007$ ) of recurrent pelvic organ prolapse after sacrospinous ligament fixation.

**Conclusion:** Sacrospinous ligament fixation in our hospital shows good post-operative outcome and low recurrence rate. The complications are mild and mostly could be managed with conservative treatment. Sacrospinous ligament fixation is a good choice for treating pelvic organ prolapse by using native tissue. Cervix may provide strong and dense tissue for suture anchor. Thus, concomitant hysterectomy anchor the suture on looser tissue (vaginal vault) that may increase the risk of recurrence.

*Wen-Hsin Chen* 陳文欣  
(Y25)



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**Long-term retrospective monocentric analysis for pelvic organ prolapse repair using transvaginal mesh**

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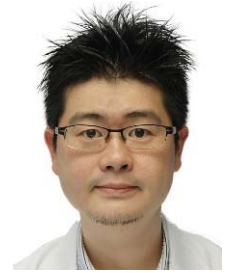
**OBJECTIVE:** The aim of the study was to assess the long-term outcomes of transvaginal mesh surgery for pelvic organ prolapse in a single center.

**METHODS:** This monocentric retrospective study included patients undergoing pelvic organ prolapse repair by placements of transvaginal mesh (including Elevate, Prolift, Prosima, Apogee-Perigee system). We were able to follow up with 695 patients from a single center from 2007-2014. The surgical history, concomitant surgery, clinical examination results, postoperative complications were collected from patients' medical records.

**RESULTS:** A total of 695 patients were included. The majority of patients had stage  $\geq$  III cystocele (94 %), stage  $\geq$  III rectocele (72.3 %) and stage  $\geq$  III hysterocele or vault prolapse (79.3%). A total of 288 and 198 of these patients had a follow-up longer than 3 years, and 5 years. Long term prolapse recurrence rate was 14 %. The average recurrence rate was 15-20% within post-operative 4 years, and the recurrence rate declined below 10% after post-operative 4 years. The mainly recurrent part was cystocele 11.8 %. The reoperation rate for reposition was 3.6 %. Mesh related complication rate (including mesh exposures and infections) was 8.9%. Majority of mesh exposure occurred during post-operative 1 yr (48.2%), The exposure rate declined under 6 % after post-operative 3 yr. The operation rate for mesh exposure was 3.7%. Preoperatively, 43.3% patients had concomitant anti-incontinent surgery with mid-urethral sling due to overt or occult stress urinary incontinence (SUI). Postoperatively, there were 8.6% cases had de novo SUI and 15.5% cases had de novo overactive bladder symptoms. The rate of postoperative dyspareunia or vaginal pain was 2.6%.

**CONCLUSIONS:** Despite the market withdrawal, the transvaginal meshes are a safe and efficient option for pelvic organ prolapse surgical management, especially for those patients with stage  $\geq$  III pelvic organ prolapse. Low rate of recurrence, mesh complication and reoperations were achieved with adequate training of surgeons.

*Kuan-Sheng Chang* 張貫昇  
(Y26)



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**Comparisons of clinical outcome of using Tisseel or barbed sutures for bleeding control and ovarian repair during laparoscopic ovarian cystectomy**

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**Objective:** To compare clinical outcome of the use of Tisseel (i.e., a 2-component fibrin sealant agent) or barbed sutures for the control of bleeding and the repair of the ovarian defect at the end of laparoscopic ovarian cystectomy.

**Methods:** All consecutive women who underwent laparoscopic ovarian cystectomy at a medical center by the corresponding author were reviewed.

**Results:** A total of 38 women who underwent laparoscopic ovarian cystectomy, and use Tisseel (n=23) or barbed sutures (n=15) for bleeding control or ovarian repair. There were no between-group difference in age, parity and baseline elliptical area of affected ovary. In addition, surgical time, blood loss, length of stay and day 1 and 2 abdominal drainage amount did not differ between these two groups. Furthermore, the largest elliptical area of affected ovary did not differ between these two groups.

**Conclusion:** Clinical outcome seems to be similar between the use of Tisseel or barbed sutures for the control of bleeding and the repair of the ovarian defect during laparoscopic ovarian cystectomy.



*Cindy Hsuan Weng* 翁瑄  
(Y27)



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**A simple, single-step technique for placement of Seprafilm® – a sodium hyaluronate/carboxymethylcellulose absorbable barrier –during laparoscopic myomectomy**

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**Objective:** We describe a simple, single-step technique for positioning of Seprafilm® – a sodium hyaluronate/carboxymethylcellulose absorbable barrier useful for the prevention of post-operative adhesions – during laparoscopic myomectomy (LM).

**Materials and Methods:** This was a retrospective, single-center, non-randomized study conducted in a tertiary-care university hospital between January 2010 and December 2016 after gaining Institutional Review Board approval. Candidates included three hundred seventy-eight women with uterine fibroids undergoing LM. The following variables were collected in all participants: age; body mass index (BMI); parity; size, number, and weight of the excised uterine fibroids; operating time; blood loss (calculated by subtracting the volume of the irrigation fluid from the total amount of fluid in the suction apparatus); length of hospital stay; final pathological diagnosis; and occurrence of postoperative complications.

**Intervention:** The Seprafilm® sheet was softened through exposure to room air for 5 min, cut into four pieces (length: 5–10 mm), rolled-up, and gently placed at the right paracolic gutter. Seprafilm® pieces unfolded semi-automatically upon their release.

**Results:** A total of 737 Seprafilm® pieces were positioned (median number per patient: 2 [range: 1–4]; median application time per piece: 1 min [range: 0.8–3.5 min]). We failed to place 16 pieces (16/737, 2.2%) in eleven patients. Twelve of the 35 women who conceived underwent cesarean section – with Seprafilm® being successfully placed in all cases. Filmy adhesions over the posterior uterine wall and omentum were observed in one patient only.

**Conclusions:** Our single-step technique for Seprafilm® placement during LM is simple, safe, and clinically effective in the prevention of filmy adhesions.



*Fang-Tzu Wu* 吳方慈  
(Y28)



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**Incidental detection of a balanced reciprocal translocation associated with Klinefelter syndrome in a male with azoospermia: The significance of genetic counseling**

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**Objective:** To present a case of Klinefelter syndrome with incidental detection of a balanced reciprocal translocation and to discuss the significance of genetic counseling.

**Case Report:** A 37-year-old married infertile male was referred for genetic study of azoospermia. His height was 195cm and his weight was 85kg. His wife and he had been married for more than one year without any pregnancy. He was referred for genetic study and cytogenetic analysis revealed a result of 47,XXY,t(4;17)(q12;q11.2). An incidental detection of a balanced reciprocal translocation was found in addition to the Klinefelter syndrome. We review the literature and we discuss the significance of genetic counseling under such a circumstance.

**Conclusion:** Genetic analysis of patients with azoospermia may incidentally detect a balanced chromosome abnormality. A complete genetic counseling of the consequence of a familial inheritance is mandatory in order to detect more family members for the prevention of unbalanced offspring.