

FORUM 2006 08

Lifelong learning and the reconstructive pelvic surgeon.

Valaitis SR, Rogers RG

Int Urogynecol J Pelvic Floor Dysfunct. 2006 Aug 1;.e-pub

Many challenges face practicing surgeons in today's medical environment. Decreasing revenues create a need for increasing patient volume. Increasing costs of malpractice insurance not only provide financial burdens, but also cause many practitioners to relocate or change the focus of their practice. Technological advancements with the rapid emergence of new procedures and medical devices tax the practicing physician's ability to keep pace of changes. These changes, in combination with increased focus on patient safety and physician competence, place even greater demands on practicing in the surgical subspecialties. In this environment, finding time to improve skills and gain competence in new procedures is a daunting task. This article addresses the topic of surgical competence, provides insight into how to learn to do and prove competence to perform new surgical procedures, as well as reviews the opportunities available for self-evaluation currently available for the practicing surgeon.

1 – THE PELVIC FLOOR 2006 08

Role of hormones in the pathophysiology of pelvic floor disorders in women.

Bhatia NN, Ho MH

Curr Opin Obstet Gynecol. 2006 Oct;18(5):525-7.

Postnatal pelvic floor muscle training for preventing and treating urinary incontinence: where do we stand?

Dumoulin C

Curr Opin Obstet Gynecol. 2006 Oct;18(5):538-43.

PURPOSE OF REVIEW: Postnatal pelvic floor muscle training aims to rehabilitate the pelvic floor muscles. To be effective, a certain exercise dosage must be respected. Recent trials evaluated the effect of different programs on prevention/treatment of urinary incontinence immediately after delivery and in treatment of persistent incontinence. **RECENT FINDINGS:** Only three systematic reviews, six trials, and four follow-up studies have been published in the past two decades. High heterogeneity in postnatal pelvic floor muscle training programs is observed throughout the literature, making comparisons difficult. In the prevention/treatment of postnatal urinary incontinence immediately after delivery and in persistent incontinence, supervised intensive programs prove more effective than standard postnatal care. Longer-term results have yet to show advantages for postnatal training programs. **SUMMARY:** Although a certain exercise dosage must be respected for a postnatal pelvic floor muscle training program to be effective, a few randomized controlled trials present such dosage. Randomized controlled trials should study the effect of supervised, intensive training protocols with adherence aids. As standard care does not seem to reduce the prevalence of postnatal urinary incontinence, obstetrics services must address delivery of postnatal pelvic floor muscle training.

Pelvic floor trauma following vaginal delivery.

Dietz HP

Curr Opin Obstet Gynecol. 2006 Oct;18(5):528-37.

PURPOSE OF REVIEW: Recent years have seen a steady increase in the information available regarding pelvic floor trauma in childbirth. A review of this information is timely in view of the ongoing discussion concerning elective caesarean section. **RECENT FINDINGS:** In addition to older evidence regarding pudendal nerve injury, it has recently been shown that inferior aspects of the levator ani and fascial pelvic organ supports such as the rectovaginal septum can be disrupted in childbirth. Such trauma is associated with pelvic organ prolapse, bowel dysfunction, and urinary incontinence. Elective caesarean section seems to have a limited protective effect that appears to weaken with time. Older age at first delivery may be associated with a higher likelihood of trauma and subsequent symptoms. **SUMMARY:** Pelvic floor trauma is a reality, not a myth. It is currently not possible, however, to advise patients as to whether avoidance of potential intrapartum pelvic floor trauma is worth the risk, cost, and effort of elective caesarean section. In some women this may well be the case. The identification of women at high risk for delivery-related pelvic

floor trauma should be a priority for future research in this field.

Operative vaginal delivery and midline episiotomy: a bad combination for the perineum.

Kudish B, Blackwell S, Mcneeley SG, Bujold E, Kruger M, Hendrix SL, Sokol R

Am J Obstet Gynecol. 2006 Sep;195(3):749-54.

OBJECTIVE: The purpose of this study was to determine the impact of operative vaginal delivery (forceps or vacuum) and midline episiotomy on the risk of severe perineal trauma. **STUDY DESIGN:** In this retrospective cohort study, we assessed the impact of maternal and obstetric factors on the risk of development of severe perineal trauma (third- and fourth-degree perineal lacerations) for all singleton, vertex vaginal live births (n = 33,842) between 1996 and 2003. **RESULTS:** Among nulliparous women, 12.1% had operative vaginal delivery, 22.4% had midline episiotomy, and 8.1% experienced severe perineal trauma. Among multiparous women, 3.4% had operative vaginal delivery, 4.2% had midline episiotomy, and 1.2% experienced severe perineal trauma. Controlling for maternal age, ethnicity, birth weight and head circumference, evaluation of the interaction of episiotomy and delivery method revealed that forceps (nulliparous women: odds ratio [OR] 8.6, 95% CI 6.5-10.7; multiparous women: OR 26.3, 95% CI 18.1-34.5) and episiotomy (nulliparous women: OR 4.5, 95% CI 3.7-5.4; multiparous women: OR 14.6, 95% CI 10.4-20.5) were consistently associated with the increased risk of anal sphincter trauma. In fact, the magnitude of effect of the statistically significant synergistic interaction was evidenced by more than 3-fold excess of risk of using operative vaginal delivery alone. **CONCLUSION:** The use of operative vaginal delivery, particularly in combination with midline episiotomy, was associated with a significant increase in the risk of anal sphincter trauma in both primigravid and multigravid women. Given the reported substantial long-term adverse consequences for anal function, this combination of operative modalities should be avoided if possible.

A randomized, controlled trial of transanal irrigation versus conservative bowel management in spinal cord-injured patients.

Christensen P, Bazzocchi G, Coggrave M, Abel R, Hultling C, Krogh K, Media S, Laurberg S

Gastroenterology. 2006 Sep;131(3):738-47.

Background & Aims: Bowel dysfunction in patients with spinal cord injury often causes constipation, fecal incontinence, or a combination of both with a significant impact on quality of life. Transanal irrigation improves bowel function in selected patients. However, controlled trials of different bowel management regimens are lacking. The aim of the present study was to compare transanal irrigation with conservative bowel management (best supportive bowel care without irrigation). **Methods:** In a prospective, randomized, controlled, multicenter trial involving 5 specialized European spinal cord injury centers, 87 patients with spinal cord injury with neurogenic bowel dysfunction were randomly assigned to either transanal irrigation (42 patients) or conservative bowel management (45 patients) for a 10-week trial period. **Results:** Comparing transanal irrigation with conservative bowel management at termination of the study, the mean (SD) scores were as follows: Cleveland Clinic constipation scoring system (range, 0-30, 30 = severe symptoms) was 10.3 (4.4) versus 13.2 (3.4) (P = .0016), St. Mark's fecal incontinence grading system (range, 0-24, 24 = severe symptoms) was 5.0 (4.6) versus 7.3 (4.0) (P = .015), and the Neurogenic Bowel Dysfunction Score (range, 0-47, 47 = severe symptoms) was 10.4 (6.8) versus 13.3 (6.4) (P = .048). The modified American Society of Colorectal Surgeon fecal incontinence scores (for each subscale, range is 0-4, 4 = high quality of life) were: lifestyle 3.0 (0.7) versus 2.8 (0.8) (P = .13), coping/behavior 2.8 (0.8) versus 2.4 (0.7) (P = .013), depression/self perception 3.0 (0.8) versus 2.7 (0.8) (P = .055), and embarrassment 3.2 (0.8) versus 2.8 (0.9) (P = .024). **Conclusions:** Compared with conservative bowel management, transanal irrigation improves constipation, fecal incontinence, and symptom-related quality of life.

2 – FUNCTIONAL ANATOMY 2006 08

Innervation of the Pelvic Floor Muscles: A Reappraisal for the Levator Ani Nerve.

Wallner C, Maas CP, Dabhoiwala NF, Lamers WH, Deruiter MC

Obstet Gynecol. 2006 Sep;108(3):529-534.

OBJECTIVE: We investigated the clinical anatomy of the levator ani nerve and its topographical relationship with the pudendal nerve. **METHODS:** Ten female pelvis were dissected and a pudendal nerve blockade was simulated. The course of the levator ani nerve and pudendal nerve was described quantitatively. The

anatomical data were verified using (immuno-)histochemically stained sections of human fetal pelvises. RESULTS: The levator ani nerve approaches the pelvic-floor muscles on their visceral side. Near the ischial spine, the levator ani nerve and the pudendal nerve lie above and below the levator ani muscle, respectively, at a distance of approximately 6 mm from each other. The median distance between the levator ani nerve and the point of entry of the pudendal blockade needle into the levator ani muscle was only 5 mm. CONCLUSION: The levator ani nerve and the pudendal nerve are so close at the level of the ischial spine that a transvaginal "pudendal nerve blockade" would, in all probability, block both nerves simultaneously. The clinical anatomy of the levator ani nerve is such that it is prone to damage during complicated vaginal childbirth and surgical interventions. LEVEL OF EVIDENCE: II-3.

Estrogen and ghrelin decrease cytoplasmic expression of p27(kip1), a cellular marker of ageing, in the striated anal sphincter and levator muscle of ovariectomized rats.

Rizk DE, Al-Marzouqi AH, Hassan HA, Al-Kedrah SS, Fahim MA
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Aug 10;.

A study was carried out to investigate the effect of estrogen and/or ghrelin on the cellular marker of ageing, p27(kip1), in pelvic floor muscles of ovariectomized rats. Virgin Wistar rats (13 months old) underwent ovariectomy followed (1 month) by 42 daily intraperitoneal 17-beta estradiol (10 mug/kg), ghrelin (2 mug/kg), both hormones, or placebo vehicle (n=6x4 groups). Six more age-matched animals underwent sham surgery without ovariectomy. Cytoplasmic expression of p27(kip1) in the striated urethral and anal sphincters and levator muscle was measured by Western blot analysis in all animals (n=30). p27(kip1) signal intensity significantly increased postovariectomy in all muscles compared to sham animals. In the anal sphincter and levator, signal intensity decreased to sham levels with ghrelin or estrogen and decreased further after estrogen or ghrelin and estrogen/ghrelin administration. Urethral sphincter signal intensity decreased without reaching sham levels after drug administration. Estrogen and/or ghrelin replacement reverses the ovariectomy-induced exacerbation of biochemical cellular ageing in the anal sphincter and levator muscle of middle-aged rats.

Qualitative and quantitative expression profile of muscarinic receptors in human urothelium and detrusor.

Tyagi S, Tyagi P, Van-le S, Yoshimura N, Chancellor MB, de Miguel F
J Urol. 2006 Oct;176(4):1673-8.

PURPOSE: We compared the complete spectrum of receptor subtypes expressed by human detrusor and its primary culture with the expression profile in a human urothelium immortalized cell line, and in fresh urothelium tissue and its primary cell culture. MATERIALS AND METHODS: The levels of mRNA expressed for receptor subtypes M(1) through M(5) were determined with reverse transcriptase-polymerase chain reaction and quantitative polymerase chain reaction in total RNA extracted individually from different human bladder specimens, including fresh tissue of human urothelium and detrusor, and their respective primary cultures, as well as from the UROtsa cell line. RESULTS: All 5 muscarinic receptors were detected in fresh human bladder tissue by reverse transcriptase-polymerase chain reaction RNA. The same was true in separated urothelium and detrusor tissue except for the lack of the M(5) receptor transcript. Receptor subtype mRNA expression in the UROtsa cell line paralleled expression in fresh human bladder. Quantitative polymerase chain reaction data further corroborated these results and showed comparable mRNA expression for M(2) and M(3) in primary detrusor cultures. Primary cultures also had a decreased copy number of receptor genes than native tissue. The decrease was even more pronounced in primary urothelium culture and the UROtsa cell line in the presence of high calcium. M(2) and M(3) receptors were also detected in urothelium and detrusor by immunoreactivity. CONCLUSIONS: We identified all 5 existing muscarinic receptor subtypes in detrusor and urothelium, and transcripts levels of M(2) and M(3) were comparable in detrusor. These results support an alternative site of action in urothelium for anti-muscarinic drugs. Urothelial receptors should be considered in the design of future drugs for overactive bladder.

3 – DIAGNOSTICS 2006 08

[May the Blaivas and Groutz nomogram substitute videourodynamic studies in the diagnosis of female lower urinary tract obstruction?]

Virseda Chamorro M, Salinas Casado J, Adot Zurbano JM, Martin Garcia C
Arch Esp Urol. 2006 Jul-Aug;59(6):601-6.

OBJECTIVES: To compare the results of the Blaivas and Groutz nomogram in the diagnosis of female urinary obstruction with videourodynamic tests. **METHODS:** We performed a transverse study in a series of 52 female patients with ages between 20 and 81 years (mean age: 48.7 years; standard deviation: 14.4 years) and functional lower urinary tract symptoms referred for videourodynamic studies. All patients underwent free flowmetry and voiding videourodynamic study. From the scores of free flowmetry and maximum detrusor pressure in the detrusor pressure/voiding flow test of the urodynamic study they were classified in one of four categories following the Blaivas and Groutz nomogram. Following urodynamic data they were classified into three categories: absence of obstruction, bladder neck obstruction and urethral obstruction. The nomogram results were compared with the videourodynamic data using the Pearson chi-square statistical test. The diagnostic sensitivity and specificity of the nomogram were also determined. **RESULTS:** The Blaivas and Groutz nomogram showed a significant association with the videourodynamic data ($p = 0.000$). Its diagnostic sensitivity for obstruction was 100%, but its specificity was only 67.5%. The percentage of diagnostic discrepancies was maximal in the mild obstruction, where one third of the patients were obstructed following the videourodynamic data. **CONCLUSIONS:** The Blaivas and Groutz nomogram is a sensitive method for the diagnosis of obstruction, but its specificity is low so that it has the tendency to overdiagnose the presence of obstruction in the female patient.

The relationship of urethral resistance pressure and pressure flow parameters in women with lower urinary tract symptoms.

Digesu GA, Chaliha C, Khullar V, Salvatore S, Milani R, Cacciapuoti C, Athanasiou S
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Aug 10; e-pub

This prospective study aims to evaluate the relationship between urethral resistance pressure (URP) and pressure flow parameters in women with lower urinary tract symptoms (LUTS). Consecutive women with LUTS attending three tertiary referral urodynamic clinics were asked to undergo urodynamic evaluation, pressure flow studies and URP measurement. The pressure flow parameters such as detrusor pressures at the start of flow (ODP), detrusor pressure at peak flow rate (PdetQmax), peak flow rate (Qmax) and detrusor pressure at the end of flow (CDP) were measured. The relationship between URP and pressure flow parameters was evaluated as well as differences between each urodynamic group. Two hundred seventy-nine women attended for urodynamic investigations. Two hundred twenty-three (79.9%) women had good quality pressure flow measurements and were included in the study. The mean age was 58 years (range 21-83). Women with urodynamic stress incontinence had significantly lower URP and ODP than those with detrusor over-activity [54.8 (+/-17.9) and 12.4 (+/-4.1) cmH(2)O, respectively, vs 85.6 (+/-21.4) and 33.7 (+/-13.3) cmH(2)O, respectively] ($p < 0.05$, Bonferroni test). Furthermore, women with urodynamic stress incontinence have significantly lower PdetQmax values as well as higher Qmax than women with competent urethral sphincters ($p < 0.05$, Bonferroni test). There was a significant correlation between ODP, PdetQmax, Qmax and URP measurements. In urodynamic stress incontinence, both URP and pressure flow parameters are reduced. Although the trend for values of both tests were similar and there was a significant correlation between these tests, we should consider that urethral function at rest differ from that during voiding due to activation of additional mechanisms. Therefore, further study is needed to confirm our results.

Automatic switching and guidance system to facilitate unassisted uroflowmetry using commercial electronic devices.

Terai A, Ueda N, Utsunomiya N, Kohei N, Aoyama T, Inoue K
Int J Urol. 2006 Aug;13(8):1154-5.

To enable male patients to undergo uroflowmetry in a private condition without medical supervision, we devised an automatic switching and patient guidance system for the spinning disk uroflowmeter Urodyn 1000, using two commercial electronic devices (an infrared motion sensor tap and a memorizable vacuum fluorescent display). Instead of running the uroflowmeter continuously, which shortens the life of the spinning disk due to mechanical wear, an infrared motion sensor turns on the devices each time a patient enters the room. The patient urinates according to the timely instructions on the visible display and voided urine directly flows into a urinal. The devices are automatically turned off 5 min after the patient leaves the room. With the use of our system, men already acquainted with uroflowmetry could perform self-administered uroflowmetry

any time in private. The system was considered useful for improving the quality of patient service.

Imaging in gynecology.

Valentin L

Best Pract Res Clin Obstet Gynaecol. 2006 Aug 9;.e-pub

This chapter summarizes the diagnostic performance (sensitivity, specificity, positive and negative likelihood ratios) of ultrasound, computer tomography, and magnetic resonance imaging in the diagnosis of various gynecological diseases and tumors. Positron emission tomography is not discussed. Imaging in infertility, in the diagnosis of Mullerian duct anomalies and in gynecological oncology (staging of gynecological cancers, diagnosis of recurrence of gynecological cancer, diagnosis of trophoblastic tumors) is not dealt with. Ultrasound is the first-line imaging method for discrimination between viable intrauterine pregnancy, miscarriage and tubal pregnancy in women with bleeding and/or pain in early pregnancy, for discrimination between benign and malignant adnexal masses and for making a specific diagnosis in adnexal tumors (e.g. dermoid cyst, endometrioma, hemorrhagic corpus luteum, etc.), for diagnosing intracavitary uterine pathology in women with bleeding problems, and for confirming or refuting pelvic pathology in women with pelvic pain. Magnetic resonance imaging can have a role as a secondary test in the diagnosis of adenomyosis, 'deep endometriosis' (e.g. endometriosis in the rectovaginal septum or in the uterosacral ligaments), and in the diagnosis of extremely rare types of ectopic pregnancy (e.g. in the spleen, liver or retroperitoneum).

Computer-assisted detection for CT colonography: external validation.

Halligan S, Taylor SA, Dehmeshki J, Amin H, Ye X, Tsang J, Roddie ME
Clin Radiol. 2006 Sep;61(9):758-63.

AIM: To externally validate a computer-assisted detection (CAD) system for computed tomography (CT) colonography, using data from a single centre uninvolved with the software development. MATERIALS AND METHODS: Twenty-five multi-detector CT colonography examinations of patients with validated polyps accumulated at a single centre were examined by two readers who used endoscopic and histopathological data to identify polyp coordinates. A CAD system that had been developed using data from elsewhere, and had not previously encountered the present data, was then applied to the data at sphericity filter settings of 0.75 and 0.50 and identified potential polyps. True-positive, false-negative, and false-positive counts were determined by comparison with the known polyp coordinates. RESULTS: Twenty-five patients had 57 polyps, median size 6mm (range 1-15mm). Per-patient sensitivity for the CAD system was 96% (24 of 25). The CAD system detected 44 (77%) polyps at sphericity setting 0.75 and 49 (86%) polyps at sphericity 0.50: the additional five polyps detected all measured 5mm or less. Sphericity of 0.75 resulted in a median of 10 (one to 34) easily dismissed false-positive prompts per patient and a median of 4 (zero to 15) that needed three-dimensional rendering before dismissal. This rose to 32 (16 to 99) and 11 (three to 35), respectively, at sphericity 0.5. CONCLUSIONS: A per-patient sensitivity of 96% was found for the CAD system (in patients with a median polyp diameter of 6mm) using external validation, a more stringent test than either internal cross-validation or temporal validation. Decreasing sphericity increases sensitivity for small polyps at the expense of decreased specificity.

Re: Three-dimensional transperineal ultrasonography for evaluation of the anal sphincter complex: another dimension in understanding peripartum sphincter trauma.

Grasso RF, Piciocchi S, Quattrocchi CC, Beomonte Zobel B
Ultrasound Obstet Gynecol. 2006 Sep;28(3):353-4.

Magnetic resonance imaging measurement of the anorectal striated muscle complex in normal children.

Tang S, Tong Q, Mao Y, Wang Y, Li S, Cao Z, Ruan Q
J Pediatr Surg. 2006 Sep;41(9):1549-55.

PURPOSE: The aim of the study was to describe and establish a normal measurement of the striated muscle complex (SMC) in healthy children using body phased-array or head coil magnetic resonance imaging. METHODS: Imaging was performed in 20 boys and 20 girls (age range, from 3 months to 14 years; average age, 3.2 years) without anorectal disorders. The dimensions of the puborectalis muscle (PR) and

external anal sphincter (EAS) were measured in different planes. RESULTS: There was a close positive correlation between absolute width and length of SMC and age ($P < .05$), whereas there was no correlation between the relative width and length of SMC and age ($P > .05$). Normal relative length of the PR and EAS were measured as 0.47 ± 0.04 and 0.41 ± 0.04 , respectively, and the normal relative width of PR and posterior EAS were 0.50 ± 0.04 and 0.44 ± 0.04 in children younger than 14 years. CONCLUSIONS: The width and length of PR and EAS increase progressively with age. The relative width and length of PR and EAS were not variable with age. A relative width and length of PR and EAS were chosen as objective criteria for normal SMC in children younger than 14 years.

4 – PROLAPSES 2006 08

Abdominal sacrohysteropexy in young women with uterovaginal prolapse: results of 20 cases.

Demirci F, Ozdemir I, Somunkiran A, Doyran GD, Alhan A, Gul B
J Reprod Med. 2006 Jul;51(7):539-43.

OBJECTIVE: To report the results of abdominal sacrohysteropexy with polypropylene mesh in young women who wish to retain their uteri following uterovaginal prolapse. STUDY DESIGN: Twenty young women underwent abdominal sacrohysteropexy and concomitant reconstructive surgery. The preoperative and postoperative protocols included a urogynecologic history, physical examination, voiding diary, 1-hour pad test, cough stress test, multichannel urodynamic studies and administration of a validated, prolapse-specific symptom inventory and quality of life instrument. RESULTS: Of the 20 patients with marked uterovaginal prolapse, 13 had urodynamic stress incontinence. Anterior and posterior vaginal wall prolapse and urodynamic stress incontinence recurred in 1 of 20 patients (5%) at a mean follow-up of 25 months. Nineteen patients stated that their sex life had improved, although 3 of them had dyspareunia. One patient was dissatisfied owing to persistent dyspareunia. The postoperative values on the symptom inventory and quality of life scores were significantly lower than the preoperative values. The low scores suggest satisfaction and no symptoms of prolapse. CONCLUSION: Abdominal sacrohysteropexy is effective and safe in the treatment of uterovaginal prolapse in women who wish to retain their uteri. It maintains a durable anatomic restoration, normal vaginal axis and sexual function. The success rate is excellent for correcting prolapse, and the complications are minimal.

Feasibility and patient satisfaction with pelvic organ prolapse and urinary incontinence day surgery.

van der Vaart CH, Lamers BH, Heintz AP
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Aug 24;.e-pub

We performed a prospective cohort study to characterize the feasibility of urinary stress incontinence and pelvic organ prolapse surgery in day care. Two hundred and one women were prepared for day surgery by a standardised protocol; 132 women underwent a single Tension-free Vaginal Tape/Tension-free Vaginal Tape-Obturator procedure, and 69 women had additional or only pelvic organ prolapse surgery. The main outcome measures were complications, satisfaction score and recommendation to others, recorded after 3 days and 6-10 weeks. We found that it is feasible and safe to perform pelvic organ prolapse and urinary incontinence surgery in day care. Patients' satisfaction is high in all aspects of care and the majority would recommend it to others. In multivariate logistic regression analysis, only dissatisfaction with the care provided by the staff of the surgical ward was significantly associated with a negative recommendation to others (odds ratio 7.3, 95% confidence interval 1.6-33.5).

Mesh augmentation during pelvic-floor reconstructive surgery: risks and benefits.

Baessler K, Maher CF
Curr Opin Obstet Gynecol. 2006 Oct;18(5):560-566.

PURPOSE OF REVIEW: Synthetic meshes are increasingly used in the surgical management of stress urinary incontinence and pelvic-organ prolapse in an attempt to improve success rates and increase the longevity of repairs. This review describes and analyses complications following pelvic-floor procedures employing synthetic meshes. RECENT FINDINGS: Type I monofilament polypropylene mesh with a large pore size is currently the mesh of choice. Chronic inflammation is a typical host response, whereas acute inflammation and predominant CD20+ lymphocyte infiltration represent an adverse host reaction and may result in defective healing. Mesh properties influence the performance and complication rate. Mesh-related

complications after midurethral slings and mesh sacrocolpopexies with monofilament polypropylene are rare. An up to 26% mesh erosion rate and up to 38% dyspareunia rate with vaginally introduced mesh for pelvic-organ prolapse repair has been reported. Concurrent hysterectomy seems to increase mesh erosion rates. SUMMARY: Surgeons should be aware of the potential complications of synthetic meshes. Until data on the safety and efficacy of synthetic mesh in vaginal reconstructive surgery emerge, its routine use outside of clinical trials cannot be recommended.

Repair of vaginal vault prolapse and pelvic floor relaxation using polypropylene mesh.

Mourtzinou A, Raz S

Curr Opin Obstet Gynecol. 2006 Oct;18(5):555-9.

PURPOSE OF REVIEW: Innumerable techniques have been described for vaginal vault prolapse and enterocele repair including abdominal (open, laparoscopic, and robotic) and vaginal techniques. Recently, the use of surgical mesh in pelvic floor surgery has become increasingly popular due to the high incidence of recurrence with primary repairs and no surrogate material. The increasing variety of available materials and techniques, combined with a lack of well conducted clinical trials, make the choice of repair to use difficult. RECENT FINDINGS: This article provides an update review on the different procedures available to the urogynecologist and female urologist for repair of vault prolapse. We will also discuss a new surgical technique for the repair of vault prolapse, which recreates the sacrouterine-cardinal ligament complex and reconstructs the pelvic floor with mesh. SUMMARY: The best approach to vaginal vault prolapse remains unknown. Surgeon comfort and preference as well as proper patient selection remain critical. The use of graft materials in pelvic floor reconstruction should have limited use in a carefully selected patient population. There is a need for well powered, controlled, long-term, randomized studies with patient generated quality-of-life questionnaires comparing the short and long-term outcomes of these techniques.

Roles of sex steroid receptors and cell cycle regulation in pathogenesis of pelvic organ prolapse.

Chung da J, Bai SW

Curr Opin Obstet Gynecol. 2006 Oct;18(5):551-4.

PURPOSE OF REVIEW: The cause of pelvic organ prolapse is multifactorial and many inciting, promoting and decompensating factors play a role in developing pelvic organ prolapse. Various clinical parameters have been studied quite extensively, but estrogen and collagen metabolism and cell proliferation and apoptosis have not been widely evaluated. This review focuses on assessing the roles of estrogen and its receptor, relationship with collagen metabolism and cell proliferation and cell apoptosis in development and progression of pelvic organ prolapse. RECENT FINDINGS: Differential expressions of sex steroid receptors in various suspensory ligaments of prolapsed uteri have been studied. How different subtypes of estrogen receptor play a role in inducing and aggravating pelvic organ prolapse has yet to be defined. The role of estrogen in collagen metabolism and cell proliferation related to development of pelvic organ prolapse is still under study. Studies on the proliferation of fibroblasts in ligaments of pelvic organ prolapse have yielded conflicting results. SUMMARY: There is still a need for additional research on precise roles of sex steroids, their receptors and cell cycle regulatory proteins and cell proliferation in pathogenesis of pelvic organ prolapse. Some of them could be the cause of pelvic organ prolapse and some of them the direct result of tissue trauma in pelvic organ prolapse.

Remodeling of vaginal connective tissue in patients with prolapse.

Alperin M, Moalli PA

Curr Opin Obstet Gynecol. 2006 Oct;18(5):544-550.

PURPOSE OF REVIEW: Pelvic organ prolapse is a common disease that negatively affects the lives of women. To date, basic science research into the pathogenesis of prolapse has been limited. The vagina and its supportive connective tissues provide one of the primary mechanisms of support to the pelvic organs. This review summarizes our current understanding of the alterations in these tissues in women with prolapse. RECENT FINDINGS: Current research suggests that the vagina and its supportive tissues actively remodel in response to different environmental stimuli. The literature has many shortcomings due to restricted access to tissue, absence of longitudinal data, and limited animal models. Nevertheless, recent studies indicate that within prolapsed tissue metabolism of collagen and elastin is altered. Thus, not only the synthesis of those structural proteins but also the balance between the activity of the major proteolytic

enzymes that degrade them and the inhibitors of proteolysis are important components to consider in studies on the pathogenesis of pelvic organ prolapse. SUMMARY: Biochemical studies of the vagina and its supportive connective tissues have improved understanding of the contribution of altered connective tissue to the pathogenesis of prolapse. It is important to continue research in this area, as the knowledge gained from these studies will allow for the development of innovative reconstructive procedures and the establishment of preventive measures.

Incidence of concomitant surgery for pelvic organ prolapse in patients surgically treated for stress urinary incontinence.

Hart SR, Moore RD, Miklos JR, Mattox TF, Kohli N
J Reprod Med. 2006 Jul;51(7):521-4.

OBJECTIVE: To examine the concomitant incidence of surgery for pelvic organ prolapse in patients undergoing a surgical procedure to correct stress urinary incontinence in both an academic and private urogynecology practices. STUDY DESIGN: A retrospective chart review was performed on all patients undergoing surgical correction of stress urinary incontinence over a 1-year period at 2 centers. RESULTS: Among 150 surgical procedures for stress urinary incontinence in the academic practice, 116 (77%) patients underwent at least 1 additional procedure for a pelvic support defect, and 72 (48%) patients required 2 or more concomitant reconstructive pelvic procedures. In the private urogynecology practice, 182 surgical procedures for stress urinary incontinence were performed, 153 (84%) patients required at least 1 additional procedure for a pelvic support defect, and 86 (47%) patients required 2 or more concomitant reconstructive pelvic procedures. CONCLUSION: Women who require surgical correction of stress urinary incontinence have a high incidence of concomitant pelvic support defects that require surgical repair. The incidence of concomitant surgery for pelvic organ prolapse between the 2 sites was not significantly different.

Randomized clinical trial of the effects on anal function of Milligan-Morgan versus Ferguson haemorrhoidectomy.

Johannsson HO, Pahlman L, Graf W
Br J Surg. 2006 Sep 4;e-pub

BACKGROUND:: Studies of haemorrhoidectomy usually report postoperative pain, healing and complications, but rarely consider anal function in the longer term. The primary aim of this randomized trial was to compare long-term changes in anal function after open (Milligan-Morgan) and closed (Ferguson) haemorrhoidectomy. METHODS:: A total of 225 patients were included in the trial, 115 in the open group and 110 in the closed group. Continence changes were recorded by means of validated questions and an incontinence score. Pain was self-reported using a visual analogue scale. RESULTS:: Postoperative pain and complications did not differ between the groups. Time to recovery was 17 days in the Milligan-Morgan group and 15 days in the Ferguson group. After 1 month the wounds were healed in 57.0 per cent of patients in the open group and 70.6 per cent of those in the closed group ($P = 0.058$). At 1 year, 78.9 per cent of the Milligan-Morgan group and 85.3 per cent of the Ferguson group reported no continence disturbance ($P = 0.072$). The incontinence score was improved at 1 year in the closed group ($P = 0.015$), but was unchanged in the open group ($P = 0.645$). Patients who had the Ferguson procedure were more satisfied with the outcome of surgery ($P = 0.047$). CONCLUSION:: Closed Ferguson haemorrhoidectomy was superior to the open Milligan-Morgan procedure with respect to long-term anal continence and patient satisfaction. Copyright (c) 2006 British Journal of Surgery Society Ltd. Published by John Wiley & Sons, Ltd.

5 – RETENTIONS 2006 08

Activation of the calcineurin pathway is associated with detrusor decompensation: a potential therapeutic target.

Clement MR, Delaney DP, Austin JC, Sliwoski J, Hii GC, Canning DA, DiSanto ME, Chacko SK, Zderic SA
J Urol. 2006 Sep;176(3):1225-9.

PURPOSE: We hypothesized that the calcineurin pathway mediated some of the complex remodeling process that allows a bladder subjected to partial outlet obstruction to adapt to its new workload. Atrial natriuretic factor mRNA expression served as a marker of calcineurin activation. MATERIALS AND METHODS: A total of 16 New Zealand White rabbits underwent surgical creation of partial outlet obstruction,

followed by randomization to receive cyclosporin A (20 mg/kg intramuscularly twice daily) or no additional treatment for 14 days. Three animals underwent 2 weeks of partial bladder outlet obstruction followed by bladder biopsy and the reversal of obstruction. RESULTS: Atrial natriuretic factor expression was seen only in bladders with severe hypertrophy and it disappeared with the reversal of outlet obstruction. Cyclosporin A treatment resulted in a decrease in atrial natriuretic factor mRNA expression ($p < 0.05$) and a marked shift in myosin heavy chain A-to-B ratios toward normal ($p < 0.01$) and an increase in smooth muscle cross sectional area ($p < 0.05$). Bladder mass decreased 40% but did not attain statistical significance ($p = 0.08$). CONCLUSIONS: The calcineurin pathway has a significant role in bladder wall hypertrophy following partial outlet obstruction. Bladder hypertrophy could not be fully prevented by cyclosporin A, suggesting that multiple signaling pathways are involved in this pathophysiology. The expression of myosin heavy chain AB isoforms is regulated in part by the calcineurin pathway.

Management of urethral strictures.

Mundy AR

Postgrad Med J. 2006 Aug;82(970):489-93.

Controlled clinical trials are unusual in surgery, rare in urology, and almost non-existent as far as the management of urethral stricture is concerned. What data there are come largely from so called "expert opinion" and the quality of this is variable. None the less, the number of so called experts, past and present, is comparatively small and in broad principle their views more or less coincide. Although this review is therefore inevitably biased, it is unlikely that expert opinion will take issue with most of the general points raised here.

Results of Double-Blind Placebo-Controlled Crossover Study of Sildenafil Citrate (Viagra) in Women Suffering from Obstructed Voiding or Retention Associated with the Primary Disorder of Sphincter Relaxation (Fowler's Syndrome).

Datta SN, Kavia RB, Gonzales G, Fowler CJ

Eur Urol. 2006 Jun 21;.

OBJECTIVES: Women with the primary disorder of sphincter relaxation find voiding difficult. Studies have identified neuronal nitric oxide synthase in the female urethral sphincter, and nitric oxide donors have been shown to decrease sphincter pressures. The aim of our study was to determine if sildenafil could improve sphincter relaxation and thereby increase flow rates and improve bladder emptying. METHODS: Twenty women with complete (5), partial retention or obstructed voiding (15) with a maximum flow rate (Q_{max}) of less than 15ml/min with an elevated maximal urethral closure pressure (92 - age cmH₂O) and sphincter volume ($>1.6\text{cm}^3$) were included in the study. The study was a double-blind, randomised, placebo-control, crossover design, with patients taking sildenafil or placebo, and with measurement of flow rate and residual volume at baseline and after each treatment phase. Voiding diary, quality of life, and International Prostate Symptom Score (IPSS) data were also collected. RESULTS: No statistical significant difference was seen in any voiding parameters and diaries when sildenafil citrate was compared with placebo. There was a significant mean decrease in IPSS of 3.64 between baseline and the sildenafil phase ($p=0.0083$), but not when compared with placebo. In the subgroup of women with partial retention and obstructed voiding (15/20), there was a statistically significant increase in Q_{max} of 4.7ml/sec ($p=0.025$) between sildenafil and baseline; however this difference was not seen when compared with placebo. CONCLUSIONS: This is the first study looking at sildenafil in voiding dysfunction in women. Clinical improvements with sildenafil were not significant when compared with placebo. Sildenafil was not effective as a therapeutic pharmacologic agent in this group of patients.

Anticholinergic Drugs in Patients with Bladder Outlet Obstruction and Lower Urinary Tract Symptoms: A Systematic Review.

Novara G, Galfano A, Ficarra V, Artibani W

Eur Urol. 2006 Jul 31;.

OBJECTIVES: To review the available evidence concerning the use of anticholinergic drugs, alone or in combination with alpha-blockers, in patients with lower urinary tract symptoms (LUTS) due to benign prostatic hyperplasia (BPH) and concomitant overactive bladder syndrome, to assess whether the currently available evidence suggests a role for antimuscarinic drugs in patients with BPH. METHODS: A systematic

review of the literature was performed using Embase, MEDLINE, and Web of Science through a complex search strategy including "free text" and "MeSH" protocols. Moreover, the Cochrane database of systematic review was browsed for records regarding BPH and the abstract books of the American Urological Association, European Association of Urology, and International Continence Society annual meetings from 2000 to 2005 were hand-searched for studies concerning the topic of the review. RESULTS: From the literature search, we identified four randomised controlled trials (RCTs), two prospective case series, and a few congress abstracts. For methodologic issues, the best RCT was based on urodynamic data, but did not provide any clinical insight on the patients' symptoms. The other papers were affected by significant methodologic or clinical drawbacks. CONCLUSION: The available data may be considered promising in terms of safety and efficacy. The evidence of the limited number of RCTs available, considering their methodologic or clinical shortcomings, is not sufficient to support the clinical use of combination therapy with alpha-blockers and anticholinergic drugs in patients with associated storage and voiding symptoms. Well-designed, large, double-blind, placebo-controlled, long-term RCTs are needed to assess the long-term safety and efficacy of antimuscarinic drugs, alone or in combination with alpha-blockers, in this category of patients.

Response to daily 10 mg alfuzosin predicts acute urinary retention and benign prostatic hyperplasia related surgery in men with lower urinary tract symptoms.

Emberton M, Lukacs B, Matzkin H, Alcaraz A, Elhilali M, Vallancien G
J Urol. 2006 Sep;176(3):1051-6.

This 6-month real life practice study shows that alfuzosin is associated with a low incidence of acute urinary retention and benign prostatic hyperplasia related surgery. It also suggests that responder status is the most important predictor of acute urinary retention and benign prostatic hyperplasia related surgery. Thus, first line treatment with alfuzosin may help select patients at risk for benign prostatic hyperplasia progression to optimize treatment.

Dorsal buccal mucosa graft urethroplasty for female urethral strictures.

Migliari R, Leone P, Berdondini E, De Angelis M, Barbagli G, Palminteri E
J Urol. 2006 Oct;176(4):1473-6.

PURPOSE: We describe the feasibility and complications of dorsal buccal mucosa graft urethroplasty in female patients with urethral stenosis. MATERIALS AND METHODS: From April 2005 to July 2005, 3 women 45 to 65 years old (average age 53.7) with urethral stricture disease underwent urethral reconstruction using a dorsal buccal mucosa graft. Stricture etiology was unknown in 1 patient, ischemic in 1 and iatrogenic in 1. Buccal mucosa graft length was 5 to 6 cm and width was 2 to 3 cm. The urethra was freed dorsally until the bladder neck and then opened on the roof. The buccal mucosa patch was sutured to the margins of the opened urethra and the new roof of the augmented urethra was quilted to the clitoris corpora. RESULTS: In all cases voiding urethrogram after catheter removal showed a good urethral shape with absent urinary leakage. No urinary incontinence was evident postoperatively. On urodynamic investigation all patients showed an unobstructed Blaivas-Groutz nomogram. Two patients complained about irritative voiding symptoms at catheter removal, which subsided completely and spontaneously after a week. CONCLUSIONS: The dorsal approach with buccal mucosa graft allowed us to reconstruct an adequate urethra in females, decreasing the risks of incontinence and fistula.

The effect of terazosin on functional bladder outlet obstruction in women: a pilot study.

Kessler TM, Studer UE, Burkhard FC
J Urol. 2006 Oct;176(4):1487-92.

PURPOSE: We assessed the effect of terazosin (Hytrin(R)) on functional bladder outlet obstruction in women. MATERIALS AND METHODS: Functional bladder outlet obstruction was defined as a maximum flow rate of less than 12 ml per second combined with a detrusor pressure at maximum flow rate of more than 20 cm H₂O in pressure flow studies in the absence of neurological disorders or mechanical causes. In a prospective pilot study 15 women with functional bladder outlet obstruction were treated with terazosin. Terazosin was initiated at 1 mg daily and gradually increased to the maintenance dose of 5 mg daily during 2 weeks. Symptoms and urodynamic parameters were assessed before and 3 to 4 weeks after the initiation of alpha-blocker therapy. RESULTS: While on terazosin, voiding symptoms subjectively improved greater than 50% in 10 of the 15 women (p = 0.002). Median maximum urethral closure pressure at rest decreased

significantly from 98 to 70 cm H₂O ($p = 0.001$), median maximum detrusor pressure decreased from 45 to 35 cm H₂O ($p = 0.008$), median detrusor pressure at maximum flow decreased from 34 to 27 ml per second and median post-void residual urine decreased from 120 to 40 ml ($p = 0.006$ and 0.002 , respectively). There was a significant increase in the median maximum flow rate from 9 to 20 ml per second and in median voided volume from 300 to 340 ml ($p = 0.0005$ and 0.021 , respectively). Storage symptoms, functional urethral length and maximum cystometric capacity did not change significantly with alpha-blocker therapy ($p > 0.05$). Overall terazosin resulted in a significant improvement in symptoms and urodynamic parameters in 10 of the 15 women (67%). **CONCLUSIONS:** Terazosin had a significant symptomatic and urodynamic effect in two-thirds of our patients. These results suggest that terazosin may be an effective treatment option in women with voiding dysfunction due to functional bladder outlet obstruction.

Transurethral ethanol injection for prostatic obstruction: an excellent treatment strategy for persistent urinary retention.

Mutaguchi K, Matsubara A, Kajiwara M, Hanada M, Mizoguchi H, Ohara S, Yasumoto H, Usui T
Urology. 2006 Aug;68(2):307-11.

Postoperative Ureteral Obstruction After Subureteral Injection of Dextranomer/Hyaluronic Acid Copolymer.

Vandersteen DR, Routh JC, Kirsch AJ, Scherz HC, Ritchey ML, Shapiro E, Wolpert JJ, Pfefferle H, Reinberg Y
J Urol. 2006 Oct;176(4):1593-1595.

PURPOSE: Subureteral injection of dextranomer/hyaluronic acid copolymer is widely accepted for the treatment of primary vesicoureteral reflux. Few studies document the incidence of surgically relevant postoperative obstruction or the characteristics of patients at risk.

Evaluation and treatment of constipation in infants and children: recommendations of the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition.

J Pediatr Gastroenterol Nutr. 2006 Sep;43(3):e1-13.

Constipation, defined as a delay or difficulty in defecation, present for 2 or more weeks, is a common pediatric problem encountered by both primary and specialty medical providers. The Constipation Guideline Committee of the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN) has formulated a clinical practice guideline for the management of pediatric constipation. The Constipation Guideline Committee, consisting of two primary care pediatricians, a clinical epidemiologist, and pediatric gastroenterologists, based its recommendations on an integration of a comprehensive and systematic review of the medical literature combined with expert opinion. Consensus was achieved through Nominal Group Technique, a structured quantitative method. The Committee developed two algorithms to assist with medical management, one for older infants and children and the second for infants less than 1 year of age. The guideline provides recommendations for management by the primary care provider, including evaluation, initial treatment, follow-up management, and indications for consultation by a specialist. The Constipation Guideline Committee also provided recommendations for management by the pediatric gastroenterologist. *Pediatric Gastroenterology, Hepatology and Nutrition*

Surgery for slow transit constipation: are we helping patients?

Zutshi M, Hull TL, Trzcinski R, Arvelakis A, Xu M
Int J Colorectal Dis. 2006 Aug 31;e-pub.

INTRODUCTION: Long-term outcome after surgery for slow transit constipation is conflicting. The aim of this study was to assess long-term quality of life after surgery. **METHODS:** The medical records of all patients undergoing colectomy with ileorectal anastomosis between 1983 and 1998 were evaluated. Preoperative, operative, and postoperative details were recorded. A survey was conducted to evaluate current symptoms and health. Quality of life was assessed using the short-form (SF)-36 survey. **RESULTS:** Sixty-nine (2 male) patients were identified. Five were deceased. Mean age at surgery was 38.6 years (range, 19.7-78.8 years). Median follow-up after surgery was 10.8 years (range, 5.1-18.6 years). Forty-one percent had a family history of constipation. Eleven (16%) had an ileus postoperatively, which responded to medical therapy. One

patient had a leak that required temporary diversion. Long-term complications occurred in 32 (46%) patients, which included hernias (3 patients; 4%), pelvic abscess (1 patient; 1.5%), rectal pain (1 patient; 1.5%), small-bowel obstruction (14 patients; 20%, with eight requiring surgery), diarrhea (5 patients; 7%), incontinence (1 patient, 1.5%), and persistent constipation (6 patients; 9%). Fifty-five percent (35/64) responded to a questionnaire. Overall, 25 of 35 (77% of the respondents) stated that surgery was beneficial. Sixty-four percent of patients have semisolid stools, 35% have liquid stools, and 4% reported hard stool. Results of the SF-36 showed the physical component score was comparable with healthy individuals. However, the mental component score was low especially in the areas of vitality (median, 45) and social functioning (median, 37). **CONCLUSION:** Surgery for constipation is not perfect, and preoperative symptoms may persist after surgery. When assessing long-term quality of life, the mental component of the SF-36 was low compared with the general population, and the physical component was similar. Moreover, because 77% report long-term improvement, surgery is beneficial for appropriate patients.

Neostigmine for refractory constipation in advanced cancer patients.

Rubiales AS, Hernansanz S, Gutierrez C, Del Valle ML, Flores LA
 J Pain Symptom Manage. 2006 Sep;32(3):204-5.

Is total colectomy the right choice in intractable slow-transit constipation?

Ripetti V, Caputo D, Greco S, Alloni R, Coppola R
 Surgery. 2006 Sep;140(3):435-40.

BACKGROUND: The aim of the study was to evaluate the functional results of surgical treatment for intractable slow-transit constipation and to establish that the importance of correct diagnosis and type of colon resection (total or segmental) is essential to achieve optimal outcome while minimizing side effects. **METHODS:** Between 1995 and 2004, of the 450 patients presenting with chronic constipation, we further investigated 33 patients with a diagnosis of slow-transit constipation that had not improved with medical or rehabilitative treatment. Preoperative evaluation included a daily evacuation diary compiled using Wexner score, psychologic assessment, Medical Outcomes Study 36-item Short Form Health Survey (SF-36), radiologic investigation of colonic transit time, enema radiograph, colpo-cysto-defecography, anal manometry, and, in selected patients, colonoscopy and pudendal nerve terminal motor latency. In 15 cases, the cause of constipation was colonic slow-transit (with a mean Wexner score of 22), which was always associated with dolichocolon. The other 18 patients presented outlet obstruction, and, therefore, these results are not included in the present report. The 15 patients with slow-transit constipation were submitted to total laparoscopic colectomy (2), total open colectomy (6), and left laparoscopic hemicolectomy for left colonic slow-transit (7). **RESULTS:** Mean follow-up was 38 months. All patients except 1 presented improvement in symptoms with daily evacuations ($P < .01$; mean Wexner score, 6). Furthermore, results of the SF-36 test showed an improvement in the perception of physical pain, and the emotional, psychologic, and general health spheres after surgical treatment. **CONCLUSIONS:** Meticulous preoperative evaluation of intractable slow-transit constipation may discriminate between the different causes of chronic constipation and thus avoid the well-known "Iceberg syndrome," which is responsible for many treatment failures.

6 – INCONTINENCES 2006 08

Total continence reconstruction: a comparison to staged reconstruction of neuropathic bowel and bladder.

Casale AJ, Metcalfe PD, Kaefer MA, Dussinger AM, Meldrum KK, Cain MP, Rink RC
 J Urol. 2006 Oct;176(4 Suppl):1712-5.

PURPOSE: Surgical treatment for neuropathic bowel and bladder has become an essential tool in maximizing the quality of life in patients with myelomeningocele. We present our results comparing results in patients who underwent total continence reconstruction of the urinary and gastrointestinal tracts to patients who underwent a separate or single operation. **MATERIALS AND METHODS:** We performed a retrospective chart review of all patients with myelomeningocele at our institution who underwent reconstruction with a cutaneous catheterizable urinary channel or Malone antegrade continence enema. We compared outcomes with regard to surgical revisions of the channel between patients who underwent the construction of each simultaneously, that is total continence reconstruction, to outcomes in those with a single channel or who

underwent reconstruction at 2 or more operations. RESULTS: Most of our patients underwent genitourinary and gastrointestinal reconstruction, and few desired surgical intervention for only a single system. We were unable to find any differences in the continence rate or stomal complications. However, patients who underwent staged reconstruction usually had significant secondary reasons for repeat surgery. CONCLUSIONS: Surgical success for urinary and fecal continence can be safely and effectively achieved through single or multiple procedures. However, because of shared pathophysiology, we believe that most patients benefit from intervention in the gastrointestinal and the genitourinary tract. Therefore, a major advantage of total continence reconstruction is avoidance of the morbidity of a second major surgical procedure.

"The Sponge Perineum:" An Innovative Method of Teaching Fourth-degree Obstetric Perineal Laceration Repair to Family Medicine Residents.

Sparks RA, Beesley AD, Jones AD
Fam Med. 2006 Sep;38(8):542-4.

The effects of antimuscarinics on health-related quality of life in overactive bladder: a systematic review and meta-analysis.

Khullar V, Chapple C, Gabriel Z, Dooley JA
Urology. 2006 Aug;68(2 Suppl):38-48.

The objective of this study was to review the effects of antimuscarinic treatments on health-related quality of life (HRQL) in patients with overactive bladder (OAB). MEDLINE, EMBASE, the Cochrane Controlled Trials Register, and the Cumulative Index to Nursing and Allied Health Literature databases were searched from 1966 through August 2004 for randomized controlled trials of antimuscarinic agents. HRQL data from included trials were extracted, and meta-analysis was performed where possible. Of 56 trials included, 25 (45%) reported HRQL and/or patient-reported outcomes. The most commonly used instruments were the Incontinence Impact Questionnaire (3 trials), the King's Health Questionnaire (KHQ; 5 trials), the Medical Outcomes Study Short Form-36 (2 trials), the Gaudenz Appraisal Questionnaire (3 trials), and the Urogenital Distress Inventory (2 trials). Results from the meta-analyses of placebo-controlled trials showed statistically significant differences in favor of antimuscarinic therapy. Differences in HRQL as assessed using the KHQ were also clinically meaningful. The meta-analysis results of active-controlled trials did not show significant differences among antimuscarinic agents. This review provides evidence that antimuscarinics provide an HRQL benefit to patients with OAB. HRQL outcomes using validated instruments are recommended for inclusion in active-controlled trials, and agreement on the most appropriate HRQL instrument is now required.

Solifenacin significantly improves all symptoms of overactive bladder syndrome.

Chapple CR, Cardozo L, Steers WD, Govier FE
Int J Clin Pract. 2006 Aug;60(8):959-66.

Overactive bladder syndrome (OAB) is a chronic condition characterised by urgency, with or without associated urge incontinence. Solifenacin succinate is a once daily, bladder selective antimuscarinic available in two doses (5 and 10 mg). The recommended dose is 5 mg once daily and can be increased to 10 mg once daily if 5 mg is well tolerated. This article presents pooled efficacy and safety data from four large, placebo-controlled, multinational phase III trials of solifenacin succinate with a total enrolment of over 2800 patients. Data from these trials show that solifenacin 5 and 10 mg once daily is significantly more effective than placebo at reducing urgency, incontinence, micturition frequency and nocturia and at increasing volume voided per micturition. Adverse events were mainly mild-to-moderate in all treatment groups. The results of these phase III trials support the use of solifenacin in the treatment of OAB.

Epidemiology, prescribing patterns and resource use associated with overactive bladder in UK primary care.

Odeyemi IA, Dakin HA, O'Donnell RA, Warner J, Jacobs A, Dasgupta P
Int J Clin Pract. 2006 Aug;60(8):949-58.

This study aimed to estimate the incidence and prevalence of overactive bladder (OAB) symptoms in the UK and analyse the use of anticholinergic/antispasmodic medications and other healthcare resources within UK

general practice. Patients with a record of urinary frequency, urgency, nocturia, urge incontinence or irritable/unstable bladder between 1987 and 2004 were identified from the General Practice Research Database. Demographic characteristics, referrals, consultations, investigations and prescriptions for medications licensed for use in OAB were identified. Regression analyses were used to identify the factors determining switches between medications, referrals and use of healthcare resources. The overall prevalence of OAB-related symptoms was 3.87 per 1000 persons, with an incidence of 2.79 per 1000 person-years. Among 68,910 patients with OAB symptoms, 19,444 (28.2%) received anticholinergic medication, of whom 14,454 (74.3%) received one drug and 4055 (20.9%) received two medications sequentially. Overall, 59.1% of patients were referred to relevant secondary care specialities, 2.8% underwent urinary tests/investigations in primary care and 0.2% were seen by a continence nurse. Resource use was higher among patients who tried several different medications. In conclusion, this study suggests that OAB may be under-diagnosed in the UK and that current guidelines recommending use of anticholinergic medication, continence nurse consultations and urinary tests/investigations are inadequately followed.

Re: Midurethral Tissue Fixation System sling.

Sivaslioglu AA

Aust N Z J Obstet Gynaecol. 2006 Oct;46(5):464-5.

Tension-free transobturator tape procedure for stress urinary incontinence.

Ho MH, Lin LL, Haessler AL, Bhatia NN

Curr Opin Obstet Gynecol. 2006 Oct;18(5):567-74.

PURPOSE OF REVIEW: Recent data on the tension-free transobturator tape procedure for the treatment of female stress urinary incontinence are reviewed. RECENT FINDINGS: Although long-term data are not available, the effectiveness and safety of the tension-free transobturator tape procedure as reported during the past 5 years are very promising and this procedure is becoming a popular surgical treatment for female stress urinary incontinence. The continence rates obtained have been similar to those obtained using the retropubic tension-free vaginal tape on short-term follow-up. Clinical data as well as studies on cadaveric dissections suggest that complication rates can be decreased significantly with the transobturator approach. In the original tension-free transobturator tape procedure, the tape is inserted through the obturator foramen from the outside-to-inside direction (skin incision to vaginal incision). The inside-to-outside approach with passage of the tape from the vaginal incision to the obturator foramen has also been described. SUMMARY: The tension-free transobturator tape procedure provides a useful alternative to the retropubic tension-free vaginal tape approach while maintaining the principles of tension-free midurethral support. By avoiding the intrapelvic and retropubic passage, complications can be decreased. The effectiveness of this approach is similar to that of tension-free vaginal tape on short-term follow-up.

Long-term effects of dextranomer endoscopic injections for the treatment of urinary incontinence: an update of a prospective study of 61 patients.

Lottmann HB, Margaryan M, Lortat-Jacob S, Bernuy M, Lackgren G

J Urol. 2006 Oct;176(4 Suppl):1762-6.

PURPOSE: To treat sphincteric deficiency in children endoscopic bladder neck injections may avoid or salvage more complex procedures. A prospective study to assess the efficacy of bladder neck injections of dextranomer based implants (Deflux(R)) was done in a 7-year period in 61 patients. MATERIALS AND METHODS: From September 1997 to September 2004 we enrolled in the study 41 males and 20 females 5 to 18 years old with severe sphincteric incompetence, including exstrophy-epispadias in 26, neuropathic bladder in 27, bilateral ectopic ureters in 5, and miscellaneous in 3. Preoperative evaluation consisted of medical history, urine culture, urinary tract ultrasound and videourodynamics. This evaluation was repeated 6 months and 1 year after treatment, and yearly thereafter. Of the patients 17 underwent 2 and 4 underwent 3 treatment sessions to achieve a definitive result. At each evaluation the case was considered cured-a dryness interval of 4 hours between voids or CIC, significantly improved-minimal incontinence requiring no more than 1 pad daily and no further treatment required, and treatment failure-no significant, long lasting improvement. Videourodynamics were mainly useful to study the evolution of bladder capacity, activity and compliance. Followup after the last injection was 6 to 84 months (mean 28). RESULTS: Mean injected

volume per session was 3.9 cc (range 1.6 to 12). Postoperative complications were temporary dysuria in 2 patients nonfebrile urinary tract infection in 10, orchid-epididymitis in 1 and urinary retention with pyelonephritis in 1. The incidence of dryness or improvement during followup was 79% (48 of 61 patients) at 1 month, 56% (31 of 55) at 6 months, 52% (24 of 46) at 1 year, 51% (18 of 35) at 2 years, 52% (16 of 31) at 3 years, 48% (12 of 25) at 4 years, 43% (9 of 21) at 5 years, 36% (4 of 11) at 6 years and 40% (2 of 5) at 7 years. The success rate according to pathological condition was similar in cases of neuropathic bladder and the exstrophy-epispadias complex (48% and 53%, respectively). The success rate in re-treated cases was 38%. After treatment a contracted bladder developed in 6 patients. Also, of the 35 patients with at least 2 years of followup an increase in capacity of at least 50% was observed in 12 of 18 with an initially small bladder. No side effects related to the substance were observed. **CONCLUSIONS:** Endoscopic treatment for pediatric severe sphincteric deficiency with dextranomer implant, a nontoxic, nonimmunogenic, nonmigratory synthetic substance, was effective up to 2 years in half of the patients. Subsequently at up to 7 years of followup a slow decrease in efficacy was observed and treatment remained beneficial in 40% of the patients.

14 years of experience with the artificial urinary sphincter in children and adolescents without spina bifida.

Ruiz E, Puigdevall J, Moldes J, Lobos P, Boer M, Ithurralde J, Escalante J, de Badiola F
J Urol. 2006 Oct;176(4 Suppl):1821-5.

PURPOSE: The efficacy of the artificial urinary sphincter to treat sphincteric incontinence in pediatric patients with spina bifida has been clearly reported. The possibility of maintaining spontaneous voiding has usually been the main reason for prosthetic device surgery. We reviewed our experience with the artificial urinary sphincter in patients without spina bifida who had had previous surgery of the bladder neck or proximal urethra. **MATERIALS AND METHODS:** From 1990 to 2004, 112 children and adolescents underwent implantation of an AMS 800trade mark artificial urinary sphincter. Of the patients 19 males and 4 females (20.5%) between ages 4 and 17 years (mean 8.1) had no spina bifida. Instead there were bladder exstrophy in 12 patients, anorectal malformation with a rectourethral or vesical fistula in 7 and epispadias in 4. A bladder neck cuff between 5.5 and 7.5 cm, and a 61-70 balloon were used in all patients. **RESULTS:** Only 1 patient was lost to followup. In 22 patients (95.6%) mean followup was 80 months (range 4 to 155). Three sphincters in patients with exstrophy were removed because of erosion and/or infection 5, 49 and 60 months after initial surgery, respectively. A total of 19 sphincters remained in place (86.3% survival rate) with 5 revisions (26.3%) because of the pump (2), the cuff (2) or balloon fluid leakage. In this group 13 patients (68.4%) voided spontaneously and 6 (31.6%) performed clean intermittent catheterization, although 3 also voided spontaneously. Overall continence was good in 87% of patients because 2 were still incontinent at night. **CONCLUSIONS:** The artificial urinary sphincter is a good long-term solution to urinary incontinence secondary to sphincter incompetence despite multiple previous surgeries of the bladder neck or proximal urethra. Patients with bladder exstrophy and many previous bladder procedures are more exposed to complications such as erosion compared with patients with epispadias or anorectal malformation. The high percent of patients maintaining spontaneous voiding and the good rate of continence are the most important benefits of this type of surgical option for sphincter incompetence.

Patient related risk factors for recurrent stress urinary incontinence surgery in women treated at a tertiary care center.

Daneshgari F, Moore C, Frinjari H, Babineau D
J Urol. 2006 Oct;176(4):1493-9.

PURPOSE: We examined patient related risk factors for recurrent stress urinary incontinence in women treated at a tertiary referral center. **MATERIALS AND METHODS:** A case-control study was done in 18 to 75-year-old women with signs and symptoms of genuine or mixed stress urinary incontinence and no prior surgical treatment who underwent an open anti-incontinence procedure between 1990 and 2002 at our institution. Cases were defined as patients who underwent more than 1 anti-incontinence surgery and controls were defined as patients who underwent only 1 anti-incontinence procedure with followup during that period. Cases and controls were matched for surgery type, surgeon and date of surgery within 1 year. A total of 47 variables were examined, including patient age, parity, incontinence type, urodynamic findings, medical history (peripheral vascular, pulmonary and cardiac disease), past and concomitant pelvic surgery, social history (alcohol and tobacco use) and body mass index. Univariate conditional logistic regression was

done first to determine which variables were potential protective or risk factors. Multivariate conditional logistic regression analysis was then used to determine which factors were statistically significant. RESULTS: The records of 2,550 women with stress or mixed urinary incontinence who underwent an open surgical procedure between 1990 and 2002 were reviewed. A total of 53 cases and 146 controls were identified. Each case was matched with 1 to 4 controls. Data on cases and controls were collected using a standardized form. At a significance level of 0.05 the possible risk factors for recurrent stress urinary incontinence based on univariate analysis were diabetes mellitus (OR 3.579, $p = 0.026$), pelvic organ prolapse (OR 5.635, $p = 0.03$) and concomitant rectocele repair (OR 5.353, $p = 0.04$). Smoking was marginally protective (OR 0.497, $p = 0.068$). After multivariate conditional logistic regression analysis diabetes mellitus (adjusted OR 3.413, $p = 0.045$), pelvic organ prolapse (adjusted OR 8.195, $p = 0.021$) and concomitant rectocele repair (adjusted OR 17.079, $p = 0.012$) remained significant risk factors, while smoking remained a protective factor (adjusted OR 0.264, $p = 0.012$). Body mass index, age, race, parity and estrogen status were not identified as risk factors for recurrent stress urinary incontinence requiring a second anti-incontinence procedure. CONCLUSIONS: In a cohort of women with stress or mixed urinary incontinence treated at our institution between 1990 and 2002 women with diabetes mellitus, pelvic organ prolapse or concomitant rectocele repair were at increased risk for repeat anti-incontinence surgery, while women who smoked were at slightly decreased risk.

Noninvasive therapies for treating post-prostatectomy urinary incontinence.

Joseph AC

Urol Nurs. 2006 Aug;26(4):271-5, 269; quiz 276.

Incorporation of a noninvasive program for both body and mind can lead to successful outcomes in men suffering from post-prostatectomy urinary incontinence. Key factors in the initial assessment and a detailed description of effective, unique treatment interventions for men with post-prostatectomy urinary incontinence are described.

Transfascial vaginal tape for surgical treatment of stress urinary incontinence.

Foglia G, Mistrangelo E, Lijoi D, Alessandri F, Ragni N

Urology. 2006 Aug;68(2):423-6.

INTRODUCTION: In the past decade, two minimally invasive, mid-urethral sling procedures have been developed to correct stress urinary incontinence: the tension-free vaginal tape and the transobturator tape. Using similar surgical principles, we describe the placement of a sling located at the mid-urethral level and placed laterally in the previously perforated endopelvic fascia. This technique was termed transfascial vaginal tape. TECHNICAL CONSIDERATIONS: A 2 to 3-cm-long vertical incision was made at the mid-urethral level. A suburethral tunnel was created bilaterally in the anterior vaginal wall until the endopelvic fascia and retropubic space were reached. A 1.5 x 8-cm monofilament polypropylene mesh was placed under the mid-urethra and laterally in the previously perforated endopelvic fascia. Bilaterally, the sling was sutured to the urethropelvic ligaments. CONCLUSIONS: We describe a new, simple, safe, minimally invasive, tension-free, and cost-effective technique for the treatment of female stress urinary incontinence.

Symptom assessment tool for overactive bladder syndrome--overactive bladder symptom score.

Homma Y, Yoshida M, Seki N, Yokoyama O, Kakizaki H, Gotoh M, Yamanishi T, Yamaguchi O, Takeda M, Nishizawa O

Urology. 2006 Aug;68(2):318-23.

OBJECTIVES: Overactive bladder (OAB) is a common symptom syndrome with urgency, urinary frequency, and urgency incontinence. To collectively express OAB symptoms, we developed the overactive bladder symptom score (OABSS). METHODS: Four symptoms--daytime frequency, nighttime frequency, urgency, and urgency incontinence--were scored. The weighing score was based on a secondary analysis of an epidemiologic database. Psychometric properties were examined in five patient groups: OAB ($n = 83$), asymptomatic controls ($n = 34$), stress incontinence ($n = 29$), benign prostatic hyperplasia ($n = 28$), and other diseases with urinary symptoms ($n = 26$). RESULTS: The maximal score was defined as 2, 3, 5, and 5 for daytime frequency, nighttime frequency, urgency, and urgency incontinence, respectively. The sum score (OABSS 0 to 15) was significantly greater in the patients with OAB (8.36) than in the other patient groups (1.82 to 5.14). The distribution of the OABSS showed a clear separation between those with OAB and

asymptomatic controls. The OABSS correlated positively with the individual scores (Spearman's $r = 0.10$ to 0.78) and quality-of-life scores assessed by the King's Health Questionnaire (Spearman's $r = 0.20$ to 0.49). The weighted kappa coefficients were 0.804 to 1.0 for each symptom score and 0.861 for OABSS. The posttreatment reduction in the OABSS was consistent with the global impression of patients of the therapeutic efficacy. **CONCLUSIONS:** The OABSS, the sum score of four symptoms (daytime frequency, nighttime frequency, urgency, and urgency incontinence), has been developed and validated. OABSS may be a useful tool for research and clinical practice.

Patient-reported outcomes in overactive bladder: the influence of perception of condition and expectation for treatment benefit.

Marschall-Kehrel D, Roberts RG, Brubaker L
Urology. 2006 Aug;68(2 Suppl):29-37.

Patient perceptions of overactive bladder (OAB) symptoms, expectations for treatment benefit, and overall treatment satisfaction share complex relations. Multiple studies have demonstrated associations between factors, such as age, sex, and ethnicity, and patient perceptions of OAB symptoms, especially urgency urinary incontinence. Perceptions of OAB are also shaped by symptom severity and impact on health-related quality of life, as well as by perceptions of family members, caregivers, and clinicians. The literature further suggests discrepancies in the reporting among patients, physicians, and family members/caregivers of the impact that urinary symptoms have on patients' emotional well-being, productivity, and daily life. Understanding the factors that affect patients' perceptions is important because these perceptions affect treatment expectations, which may predict treatment outcomes. Studies designed to evaluate the relations between expectations for OAB treatment and patient satisfaction have not been performed to date, but studies in other patient populations suggest that expectations of positive outcomes are associated with greater treatment satisfaction. We emphasize that patient satisfaction with treatment is directly related to fulfillment of positive expectations, and that patient expectations should be realistic and agreed on by patient and physician. We also discuss strategies that may be used by physicians managing patients with OAB to develop stronger patient-physician partnerships, including the effective communication required to make treatment decisions and set realistic expectations.

Assessment of treatment outcomes in patients with overactive bladder: importance of objective and subjective measures.

Abrams P, Artibani W, Gajewski JB, Hussain I
Urology. 2006 Aug;68(2 Suppl):17-28.

Overactive bladder (OAB) is a highly prevalent symptom syndrome that negatively affects health-related quality of life (HRQL). In clinical practice, the diagnosis and treatment of OAB are largely driven by a patient's reporting of symptoms, often in combination with objective assessment. Thus, OAB provides the opportunity to examine the relations between objective (eg, urodynamic studies, bladder diary variables) and subjective (eg, symptom bother, HRQL) outcomes. We compared objective and subjective results from 27 trials recently evaluated in a systematic review and meta-analysis of antimuscarinic agents used to treat OAB. Many studies demonstrated concurrent improvements in both types of outcomes. However, several reports showed that although pharmacotherapy may reduce micturition frequency or increase bladder capacity, treated patients may not perceive a significant benefit to HRQL. We conclude that objective assessments can help determine the underlying causes of OAB symptoms and assess the effects of treatment, but that these results are not always predictive of subjective outcomes, which are influenced by a patient's priorities and lifestyle, and thus highly individualized. A patient's perception of treatment success should be regarded as an important measure of efficacy because a patient considers the trade-offs between symptom improvement, adverse events, and effects on daily life when assessing overall treatment benefit. We recommend that subjective measures become standard considerations in the initial evaluation and treatment of patients with OAB.

Development and validation of patient-reported outcomes measures for overactive bladder: a review of concepts.

Coyne KS, Tubaro A, Brubaker L, Bavendam T
Urology. 2006 Aug;68(2 Suppl):9-16.

Patient-reported outcome (PRO) measures are a valuable means for determining how a disease and its treatment affect patients, including effects on health-related quality of life (HRQL). To ensure that the results obtained with PROs are clinically useful, data must be gathered using valid and reliable instruments. Developing such instruments requires a multistep, structured process that incorporates cognitive psychology, psychometric theory, and patient and clinician input. The process begins by determining the intent and purpose of the PRO and culminates in studies that demonstrate the measure's validity, reliability, and responsiveness. Several valid and reliable PROs are available for assessing the effects of treatment on symptom severity, symptom bother, and HRQL in patients with overactive bladder.

Patient-reported outcomes in overactive bladder: importance for determining clinical effectiveness of treatment.

Brubaker L, Chapple C, Coyne KS, Kopp Z
Urology. 2006 Aug;68(2 Suppl):3-8.

Overactive bladder (OAB) is a condition defined by its symptoms--urinary urgency with or without urgency urinary incontinence and often with frequency and nocturia. As such, determining the efficacy of OAB treatments using objective measures, such as urodynamic testing, can be difficult. A better means of gauging treatment efficacy for symptom-based conditions is through the use of patient-reported outcomes (PROs). With PROs, clinicians can gain insight into how a treatment affects a patient's symptoms and whether improvement in symptoms has a positive effect from the patient's perspective. PROs are increasingly being included as end points in clinical trials, including those of antimuscarinic drugs for OAB. Consequently, clinicians should become familiar with the most commonly used instruments. We provide an overview of instruments used to assess symptoms, health-related quality of life, and treatment satisfaction in patients with OAB and discuss how PROs can be incorporated into clinical trial protocols.

Periurethral cellular injection: comparison of muscle-derived progenitor cells and fibroblasts with regard to efficacy and tissue contractility in an animal model of stress urinary incontinence.

Kwon D, Kim Y, Pruchnic R, Jankowski R, Usiene I, de Miguel F, Huard J, Chancellor MB
Urology. 2006 Aug;68(2):449-54.

OBJECTIVES: To compare muscle-derived cells (MDCs) and fibroblasts with regard to their potential for restoration of urethral function on injection in a previously established animal model of stress urinary incontinence. **METHODS:** The animals were divided into four (dosage) or five (cell concentration) experimental groups: normal, nontreated controls (normal group) or bilateral sciatic nerve transection with either periurethral injection of saline (saline group), MDCs (MDC group), fibroblasts (fibroblast group), or MDC/fibroblast mixture (mixed group). At 4 weeks after injection, the leak point pressure (LPP) was measured and contractility testing and histologic analysis were performed. **RESULTS:** The histologic examination demonstrated muscular atrophy in the saline group and new striated muscle fibers at the sites of MDC injection in the MDC group, but not in the fibroblast group. Denervation of the urethra resulted in a significant decrease of maximal fast-twitch muscle contraction amplitude to only 9% of normal. MDC injection into the denervated urethra significantly improved the fast-twitch muscle contraction amplitude to 73% of normal. The LPP of the normal, saline, MDC, fibroblast, and mixed groups at 4 weeks after treatment was 43.3 +/- 2.5, 25.8 +/- 1.4, 38.2 +/- 4.2, 38.3 +/- 1.2, and 34.5 +/- 3.3 cm H₂O, respectively. In the cell dosage experiment, the LPP increased with increases in the injected cell number. Evidence of obstruction was observed in the high-dose (1 x 10⁷) cells) fibroblast group. **CONCLUSIONS:** Although both MDCs and fibroblast injection increased the LPP in a stress urinary incontinence rat model, only MDCs significantly improved urethral muscle strip contractility. Moreover, urinary retention developed with high-dose fibroblast injection, but not with MDC injection.

Effects of potassium channel modulators on human detrusor smooth muscle myogenic phasic contractile activity: potential therapeutic targets for overactive bladder.

Darblade B, Behr-Roussel D, Oger S, Hieble JP, Lebret T, Gorny D, Benoit G, Alexandre L, Giuliano F
Urology. 2006 Aug;68(2):442-8.

OBJECTIVES: Increased urinary bladder detrusor smooth muscle phasic contractility has been suggested to be associated with idiopathic bladder overactivity (OAB). We examined the role of voltage-dependent L-type calcium channels, adenosine triphosphate-sensitive potassium (K(ATP)) channels, and calcium-activated

potassium (BK(Ca) and SK(Ca)) channels in the regulation of human detrusor phasic contractile activity. METHODS: Isolated human bladder strip phasic contractions were measured and quantified as the mean area under the force-time curve, amplitude, and frequency of phasic contractions in 22 bladder samples. RESULTS: Human detrusor strips displayed myogenic phasic contractions in the presence of atropine (10(-6) M), phentolamine (10(-6) M), propranolol (10(-6) M), suramin (10(-5) M), and tetrodotoxin (10(-6) M). The L-type calcium channel inhibitor nifedipine (300 nM) abolished the contractile activity. Blockade of K(ATP) channels by glibenclamide (1 and 10 microM) did not alter myogenic contractions. In contrast, the K(ATP) channel opener pinacidil (10 microM) markedly inhibited phasic contractility. Iberitoxin (100 nM) and apamin (100 nM), potent and selective inhibitors of BK(Ca) and SK(Ca) channels, respectively, significantly increased the area under the force-time curve and the amplitude of contractions. CONCLUSIONS: Phasic contractions of human detrusor are dependent on calcium entry through L-type calcium channels. BK(Ca) and SK(Ca) channels play a key role in the modulation of human detrusor smooth muscle phasic contractility. Furthermore, these observations support the concept that increasing conductance through K(ATP), BK(Ca), and SK(Ca) channels may represent attractive pharmacologic targets for decreasing phasic contractions of detrusor smooth muscle in OAB.

Is the Quality of Life Better in Patients with Colostomy than Patients with Fecal Incontinence?

Colquhoun P, Kaiser R Jr, Efron J, Weiss EG, Noguerras JJ, Vernava AM 3rd, Wexner SD

World J Surg. 2006 Aug 29;e-pub

BACKGROUND: A colostomy offers definitive treatment for individuals with fecal incontinence (FI). Patients and physicians remain apprehensive regarding this option because the quality of life (QOL) with a colostomy is presumably worse than living with FI. The aim of this study, therefore, was to compare the QOL of colostomy patients to patients with FI. METHODS: A cross-sectional postal survey of patients with FI or an end colostomy was undertaken. QOL measures used included the Short Form 36 General Quality of Life Assessment (SF-36) and the Fecal Incontinence Quality of Life score (FIQOL). RESULTS: The colostomy group included 39 patients and the FI group included 71 patients. The average FI score for FI group was 12 +/- 4.9 (0 = complete continence, 20 = severe incontinence). In the colostomy group the average colostomy function score was 12.9 +/- 3.8 (7 = good function, 35 = poor function). Analysis of the SF-36 revealed higher social function score in the colostomy group compared to the FI group. Analysis of the FIQOL revealed higher scores in the coping, embarrassment, lifestyle scales, and depression scales in the colostomy group compared to the FI group. CONCLUSION: A colostomy is a viable option for patients who suffer from FI and offers a definitive cure with improved QOL.

[Dynamic graciloplasty vs artificial bowel sphincter in the management of severe fecal incontinence.]

Ruthmann O, Fischer A, Hopt UT, Schrag HJ

Chirurg. 2006 Aug 1;.

Dynamic graciloplasty (DGP) and the Acticontrade mark Neosphincter (artificial bowel sphincter, ABS) are well-established therapeutic instruments in patients with severe fecal incontinence. However, the success rates in the literature must be interpreted with caution. The report presented here presents firstly a critical analysis of 1510 patients in 52 studies (29 DGP vs 23 ABS). The evidence of these studies was assessed using the Oxford EBM criteria. All data were statistically analysed. Up to 94% of the studies analysed show EBM levels of only >3b. Both procedures show significant improvements in postoperative continence scores (p<0.001) and a significant advantage of ABS over DGP. Nevertheless, they are associated with a high incidence of morbidity in the long term (infection rate ABS vs DGP 21.74% vs 35.1%, revision rate ABS vs DGP 37.53% vs 40.64%, and ABS explantation rates of 30%). Presently no therapeutic recommendation can be expressed based on the few data available. Furthermore, therapy should be performed in specialized centers and patients should be given a realistic picture of the critical outcome of both surgical techniques.

Outcome of antegrade continence enema procedures for faecal incontinence in adults.

Lefevre JH, Parc Y, Giraudo G, Bell S, Parc R, Turet E

Br J Surg. 2006 Sep 4;.

BACKGROUND: Faecal incontinence has major consequences. Colostomy has been the mainstay of therapy when other options fail. Operations such as the Malone procedure have been proposed as an alternative. The aim of this study was to evaluate the outcomes and quality of life of patients having a Malone

procedure for the treatment of faecal incontinence. **METHODS:** Charts of patients who had had a Malone procedure or equivalent between 1998 and 2004 were reviewed. The patients completed a Short Form (SF) 36 quality of life questionnaire. **RESULTS:** The study included 25 patients (17 female; median age 47 years). In seven, the appendix was used; an ileoappendicostomy was performed in the other 18. Three patients were lost to follow-up; the remaining 22 were followed for a median (range) of 21 (1-61) months. Five patients had a cutaneous stenosis; another had the appendicostomy removed and replaced by a colostomy. Four patients no longer used the stoma for irrigation. All other patients were completely clean except one, who reported occasional night-time seepage. The mean SF-36 showed a good physical recovery (43.9) but persisting psychological distress (36.0). **CONCLUSION:** The Malone procedure or equivalent achieves good results in the management of faecal incontinence, although psychological distress persists after surgery. Copyright (c) 2006 British Journal of Surgery Society Ltd. Published by John Wiley & Sons, Ltd.

Association of Fecal Incontinence with Physical Disability and Impaired Cognitive Function.

Quander CR, Morris MC, Mendes de Leon CF, Bienias JL, Evans DA
Am J Gastroenterol. 2006 Sep 4;.

OBJECTIVES: Fecal incontinence is a common health problem for older people and is associated with significant morbidity and cost. In this study, we report on the association of fecal incontinence with physical disability and impaired cognitive function in a large bi-racial population of individuals aged 65 yr and older. **METHODS:** Study subjects are participants of the Chicago Health and Aging Project (CHAP), an ongoing study of older Chicago residents. A total of 6,099 participants completed the baseline in-home interview and assessments used in this analysis. Physical disability was assessed using a performance-based measure of basic physical functions and three commonly used self-report measures. Impaired cognitive function was assessed using a global measure of the averaged scores of four cognitive tests. The question used to determine the presence of fecal incontinence was: "In the past few months have you ever lost control of your bowels when you didn't want to?" **RESULTS:** In multiple logistic regression models adjusted for age, sex, and race, fecal incontinence was correlated with the presence of physical disability and impaired cognitive function on every measure. For example, using the performance-based measure of physical function, the odds of prevalent fecal incontinence were higher by 20% (OR 1.20, 95% CI 1.2-1.2) for each additional unit higher on the performance score, indicating a lower physical performance. The prevalence odds ratio for fecal incontinence was decreased by 51% for each one-point increase in the global cognitive score, indicating higher cognitive function. We found a statistically significant interaction between both race and physical disability and race and impaired cognitive function, such that the associations were stronger in blacks than in non-blacks. These associations remained after further adjustment for diabetes and stroke, and the intake of psychoactive medications. **CONCLUSION:** In urban, community-dwelling, older adults, fecal incontinence may be more common among persons with physical disability and impaired cognitive function.

Novel approaches in the treatment of fecal incontinence.

Person B, Kaidar-Person O, Wexner SD
Surg Clin North Am. 2006 Aug;86(4):969-86.

7 – PAIN 2006 08

Successful injection for coccyx pain.

Foye PM, Buttaci CJ, Stitik TP, Yonclas PP
Am J Phys Med Rehabil. 2006 Sep;85(9):783-4.

Pain and neuromuscular disease: the results of a survey.

Tiffreau V, Viet G, Thevenon A
Am J Phys Med Rehabil. 2006 Sep;85(9):756-66.

OBJECTIVE: The objective of this study was to evaluate pain frequency, severity, location, treatment, and relief in a population of adult patients with neuromuscular disorders (NMD). **DESIGN:** The authors used a self-completion mail questionnaire from the Physical Medicine Clinic at the Lille University Medical Center (northern France). Two hundred eighty-one adults with a confirmed diagnosis of hereditary neuromuscular

disease were mailed a questionnaire, which was returned by 125 subjects (response rate = 45%). The main outcome measures were mean motor deficiency scores (on the Brooke and Vignos scales), anxiety and depression scores, pain intensity (on a 0-10 numeric scale) and location, frequency of pain-aggravating situations, and pain treatment and relief. RESULTS: Seventy-three percent of respondents reported pain and 62% reported chronic pain (defined as pain for at least 3 mos). The mean pain intensity was 6.1/10 with 40% reporting severe pain (a score of ≥ 7). Forty-six percent and 16% of subjects had a high risk for anxiety and depression, respectively. The most common pain-aggravating situations were "walking," "standing," and "muscle stretching." Walking was more frequently cited as a pain-aggravating situation by the chronic pain population than by the acute pain population. Seventy percent of patients with pain had received at least one analgesic drug. Massage was the most frequently prescribed physical treatment. CONCLUSIONS: Pain is a frequent symptom in adult patients with NMD and needs to be better characterized in this population. The use of painkillers and physical pain treatments did not seem to provide adequate relief for the patients studied here.

Tender Point Examination in Women With Vulvar Vestibulitis Syndrome.

Pukall CF, Baron M, Amsel R, Khalife S, Binik YM

Clin J Pain. 2006 Sep;22(7):601-609.

OBJECTIVES: To examine whether generalized pain sensitivity in women with vulvar vestibulitis syndrome (VVS) is increased, suggestive of altered pain processing at the level of the central nervous system, and to investigate pain history and other pain measures in women with VVS. METHODS: Sixteen women with VVS and 16 age-matched (± 3 years) and oral contraceptive status-matched (yes or no) control women participated in this cross-sectional study. The TP examination, typically used in the diagnosis of FMS, consists of the palpation of 9 bilateral nonvulvar areas by a blinded rheumatologist and was the main measure of generalized sensitivity. Pain intensity and unpleasantness rating (0 to 10) were recorded after each palpation. In addition, nonvulvar pain history, pain interference, catastrophizing, and anxiety were assessed via questionnaires. RESULTS: Women with VVS had significantly more painful TPs than nonaffected women; they reported significantly higher pain intensity and unpleasantness ratings and displayed more pain behaviors than controls ($P < 0.05$). Furthermore, VVS patients reported having experienced more pain problems and associated interference, they catastrophized more in response to vulvar and nonvulvar pain, and they had higher levels of trait anxiety than controls ($P < 0.05$). DISCUSSION: These results are consistent with recent findings of generalized sensitivity and heightened responses to pain in women with VVS. These results suggest that the mechanisms involved in VVS may include those that are genital specific in addition to those that are more generalized, and possibly centrally mediated.

Postinfectious irritable bowel syndrome--a meta-analysis.

Halvorson HA, Schlett CD, Riddle MS

Am J Gastroenterol. 2006 Aug;101(8):1894-9; quiz 1942.

OBJECTIVES: Irritable bowel syndrome (IBS) is a heterogeneous disorder affecting 12% of the population worldwide. Several studies identify IBS as a sequela of infectious gastroenteritis (IGE) with reported prevalence ranging from 4% to 31% and relative risk from 2.5 to 11.9. This meta-analysis was conducted to explore the differences between reported rates and provide a pooled estimate of risk for postinfectious irritable bowel syndrome (PI-IBS). DATA SOURCES: Electronic databases (MEDLINE, OLDMEDLINE, EMBASE, Cochrane database of clinical trials) and pertinent reference lists (including other review articles). REVIEW METHODS: Data were abstracted from included studies by two independent investigators; study quality, heterogeneity, and publication bias were assessed; sensitivity analysis was performed; and a summative effect estimate was calculated for risk of PI-IBS. RESULTS: Eight studies were included for analysis and all reported elevated risk of IBS following IGE. Median prevalence of IBS in the IGE groups was 9.8% (IQR 4.0-13.3) and 1.2% in control groups (IQR 0.4-1.8) (sign-rank test, $p = 0.01$). The pooled odds ratio was 7.3 (95% CI, 4.7-11.1) without significant heterogeneity (chi2 heterogeneity statistic, $p = 0.41$). Subgroup analysis revealed an association between PI-IBS risk and IGE definition used. CONCLUSIONS: This study provides supporting evidence for PI-IBS as a sequela of IGE and a pooled risk estimate revealing a sevenfold increase in the odds of developing IBS following IGE. The results suggest that the long-term benefit of reduced PI-IBS may be gained from primary prevention of IGE.

Peripheral and central contributions to hyperalgesia in irritable bowel syndrome.

Price DD, Zhou Q, Moshiree B, Robinson ME, Nicholas Verne G
J Pain. 2006 Aug;7(8):529-35.

Irritable bowel syndrome (IBS) is a common gastrointestinal disorder seen by gastroenterologists. We discuss some recent evidence for potential neural mechanisms that could contribute to somatic and visceral hyperalgesia in IBS patients. The combination of research studies of human IBS patients and studies of rats with delayed rectal hypersensitivity after recovery from experimentally induced neonatal colitis strongly suggests a mechanism wherein both primary visceral hyperalgesia and secondary widespread cutaneous hyperalgesia are dynamically maintained by tonic impulse input from the noninflamed colon and/or rectum. The secondary hyperalgesia is likely to be at least partly related to sensitization of spinal cord dorsal horn neurons and in this respect might be similar to other persistent pain conditions such as fibromyalgia and complex regional pain syndrome. PERSPECTIVE: Pain in irritable bowel syndrome is likely to be at least partly maintained by peripheral impulse input from the colon/rectum and central sensitization, yet it is also highly modifiable by psychological factors such as nocebo and placebo effects. A synergistic interaction might occur between psychological factors and abnormal afferent processing.

8 – FISTULAE 2006 08

Fournier's gangrene and its emergency management.

Thwaini A, Khan A, Malik A, Cherian J, Barua J, Shergill I, Mammen K
Postgrad Med J. 2006 Aug;82(970):516-9.

Fournier's gangrene (FG) is a rare but life threatening disease. Although originally thought to be an idiopathic process, FG has been shown to have a predilection for patients with diabetes as well as long term alcohol misuse; however, it can also affect patients with non-obvious immune compromise. The nidus is usually located in the genitourinary tract, lower gastrointestinal tract, or skin. FG is a mixed infection caused by both aerobic and anaerobic bacterial flora. The development and progression of the gangrene is often fulminating and can rapidly cause multiple organ failure and death. Because of potential complications, it is important to diagnose the disease process as early as possible. Although antibiotics and aggressive debridement have been broadly accepted as the standard treatment, the death rate remains high.

Treatment of perianal fistulas in Crohn's disease by local injection of antibody to TNF-alpha accounts for a favourable clinical response in selected cases: A pilot study.

Asteria CR, Ficari F, Bagnoli S, Milla M, Tonelli F
Scand J Gastroenterol. 2006 Sep;41(9):1064-72.

Objective. Intravenously administered infliximab, a monoclonal antibody directed against tumor necrosis factor-alpha, has been proven to be efficacious in the treatment of fistulas in patients with Crohn's disease. It has recently been suggested that local injections of infliximab might be beneficial as well. The aim of this study was to assess whether infliximab could play an effective role in the local treatment of perianal fistulas in Crohn's disease. Material and methods. Local infliximab injections were administered to 11 patients suffering from Crohn's disease complicated by perianal disease. Eligible subjects included Crohn's disease patients with single or multiple draining fistulas, regardless of status of luminal disease at baseline. Patients, however, were excluded from the study if they had perianal or rectal complications, such as abscesses or proctitis or if they had previously been treated with infliximab. Twenty-milligram doses of infliximab were injected along the fistula tract and around both orifices at baseline and then every 4 weeks for up to 16 weeks or until complete cessation of drainage. No further doses were administered to patients who did not respond after three injections. Efficacy was measured in terms of response (a reduction in fistula drainage of 50% or more) and remission (complete cessation of fistula drainage for at least 4 weeks). Time to loss of response and health-related quality of life were also evaluated. Results. Overall, 8/11 patients (72.7%) responded to the therapy and 4/11 (36.4%) reached remission, whereas 3/11 patients (27.2%) showed no response. Response or remission was very much dependent on the location of the fistulas, and time to loss of response was generally longer for patients who reached remission compared to patients in response. Changes in health-related quality of life, as assessed by the Inflammatory Bowel Disease Questionnaire (IBDQ), also reflected response or remission, with more marked improvements associated with remission. After a mean 10.5 months' follow-up (range 7-18 months), 6/11 patients (54.5%) are in response and 4/11

patients (36.4%) are in remission. No adverse events have been observed in this cohort of patients. Conclusions. Local injections of infliximab along the fistula tract seem to be an effective and safe treatment of perianal fistulas in Crohn's disease. However, further controlled clinical investigations are warranted.

Clinical and manometric results of endorectal advancement flaps for complex anal fistula.

Uribe N, Millan M, Minguez M, Ballester C, Asencio F, Sanchiz V, Esclapez P, Del Castillo JR
Int J Colorectal Dis. 2006 Aug 2;:e-pub

BACKGROUND AND AIM: Endorectal advancement flap repair is a well-recognized method for the treatment of complex anorectal fistula. The purpose of this study was to prospectively assess the clinical and functional results of endorectal advancement flaps for complex anorectal fistula and to identify factors that affect outcome. **MATERIALS AND METHODS:** A prospective study of 56 patients was performed. Clinical and functional results were studied using the Wexner continence scale and anal manometry before and after surgery. Factors associated with recurrence and incontinence were analyzed by univariate and multivariate regression analysis. **RESULTS:** Sixty endorectal flaps were constructed in 56 patients. Mean age was 49 years (range 24-74). The fistula was of cryptoglandular origin in 91.1% cases. Mean follow-up was 43.8 months. The technique was repeated in four patients because of recurrence (7.1%), with subsequent healing in all cases. There were significant reductions in maximum resting pressure 3 months after surgery (83.6+/-33.2 vs 45.6+/-18.3, $p < 0.001$) and maximum squeeze pressure (208.8+/-91.5 vs 169.5+/-75, $p < 0.001$). Before surgery, five patients (8.9%) reported incontinence symptoms. After surgery, 78.6% patients had normal continence, seven patients (12.5%) complained of minor incontinence, and five (9%) had major continence disturbances. None of the variables studied (age, sex, previous fistula surgery, rectovaginal fistula, and Crohn's disease) affected the outcome of the procedure in multivariate analysis. **CONCLUSIONS:** Endorectal advancement flap repair is an effective technique for complex anal fistula, with a low recurrence rate (7.1%). Patients (21.4%) reported disturbed anal continence. It is still not possible to identify factors that are predictive of failure or incontinence.

9 – BEHAVIOUR, PSYCHOLOGY, SEXOLOGY 2006 08

The effect of acute psychologic stress on systemic and rectal mucosal measures of inflammation in ulcerative colitis.

Mawdsley JE, Macey MG, Feakins RM, Langmead L, Rampton DS
Gastroenterology. 2006 Aug;131(2):410-9.

BACKGROUND & AIMS: Recent studies suggest that life events and chronic stress increase the risk of relapse in inflammatory bowel disease. Our aim was to study the effects of acute psychologic stress on systemic and rectal mucosal inflammatory responses in patients with inactive ulcerative colitis (UC). **METHODS:** Twenty-five patients with inactive UC and 11 healthy volunteers (HV) underwent an experimental stress test. Ten patients with UC and 11 HV underwent a control procedure. Before and after each procedure, systemic inflammatory response was assessed by serum interleukin (IL)-6 and IL-13 concentrations, tumor necrosis factor (TNF)-alpha and IL-6 production by lipopolysaccharide (LPS)-stimulated whole blood, leukocyte count, natural killer (NK) cell numbers, platelet activation, and platelet-leukocyte aggregate (PLA) formation. In patients with UC, rectal mucosal inflammation was assessed by TNF-alpha, IL-13, histamine and substance P release, reactive oxygen metabolite (ROM) production, mucosal blood flow (RMBF) and histology. **RESULTS:** Stress increased pulse ($P < .0001$) and systolic BP ($P < .0001$). In UC, stress increased LPS-stimulated TNF-alpha and IL-6 production by 54% ($P = .004$) and 11% ($P = .04$), respectively, leukocyte count by 16% ($P = .01$), NK cell count by 18% ($P = .0008$), platelet activation by 65% ($P < .0001$), PLA formation by 25% ($P = .004$), mucosal TNF-alpha release by 102% ($P = .03$), and ROM production by 475% ($P = .001$) and reduced rectal mucosal blood flow by 22% ($P = .05$). The control protocol did not change any of the variables measured. There were no differences between the responses of the patients with UC and HV. **CONCLUSIONS:** Acute psychologic stress induces systemic and mucosal proinflammatory responses, which could contribute to exacerbations of UC in ordinary life.

Where does hypnotherapy stand in the management of irritable bowel syndrome? A systematic review.

Gholamrezaei A, Ardestani SK, Emami MH

J Altern Complement Med. 2006 Jul-Aug;12(6):517-27.

Background: Irritable bowel syndrome (IBS) is a gastrointestinal disorder characterized by chronic abdominal pain and altered bowel habits in the absence of any organic cause. Despite its prevalence, there remains a significant lack of efficient medical treatment for IBS to date. However, according to some previous research studies, hypnosis has been shown to be effective in the treatment of IBS. Aim: To determine the definite efficacy of hypnosis in the treatment of irritable bowel syndrome. Methods: A systematic review of the literature on hypnosis in the treatment of IBS from 1970 to 2005 was performed using MEDLINE((R)). Full studies published in English were identified and selected for inclusion. We excluded case studies and those studies in which IBS symptoms were not in the list of outcome measures. All studies were reviewed on the basis of the Rome Working Team recommendations for design of IBS trials. Results: From a total of 22 studies, seven were excluded. The results of the reviewed studies showed improved status of all major symptoms of IBS, extracolonic symptoms, quality of life, anxiety, and depression. Furthermore these improvements lasted 2-5 years. Conclusions: Although there are some methodologic inadequacies, all studies show that hypnotherapy is highly effective for patients with refractory IBS, but definite efficacy of hypnosis in the treatment of IBS remains unclear due to lack of controlled trials supporting this finding.

Primary care for lesbians and bisexual women.

Mravcak SA

Am Fam Physician. 2006 Jul 15;74(2):279-86.

For the most part, lesbians and bisexual women face the same health issues as heterosexual women, but they often have difficulty accessing appropriate care. Physicians can improve care for lesbians and bisexual women by acknowledging the potential barriers to care (e.g., hesitancy of physicians to inquire about sexual orientation and of patients to disclose their sexual behavior) and working to create a therapeutic physician-patient relationship. Taking an inclusive and nonjudgmental history and being aware of the range of health-related behaviors and medicolegal issues pertinent to these patients enables physicians to perform relevant screening tests and make appropriate referrals. Some recommendations, such as those for screening for cervical cancer and intimate partner violence, should not be altered for lesbians and bisexual women. Considerations unique to lesbians and bisexual women concern fertility and medico-legal issues to protect familial relationships during life changes and illness. The risks of suicidal ideation, self-harm, and depression may be higher in lesbians and bisexual women, especially those who are not open about their sexual orientation, are not in satisfying relationships, or lack social support. Because of increased rates of nulliparity, the risks of conditions such as breast and ovarian cancers also may be higher. The comparative rates of alcohol and drug use are controversial. Smoking and obesity rates are higher in lesbians and bisexual women, but there is no evidence of an increased risk of cardiovascular disease.

Colpoperineoplasty in women with a sensation of a wide vagina.

Pardo JS, Sola VD, Ricci PA, Guiloff EF, Freundlich OK

Acta Obstet Gynecol Scand. 2006;85(9):1125-7.

Background. In women complaining of a wide vagina and decreased sexual satisfaction we performed colporrhaphy - including perineoplasty in most cases. Methods. Between November 2003 and October 2004, a total of 53 patients were selected for operation at the Urogynecology and Vaginal Surgery Unit, Las Condes Clinic, Chile. The patients were requested to assess the results of surgery in terms of experienced vaginal tightening and regained or enhanced sexual satisfaction. Results. Six months after surgery, 94% experienced a tighter vagina and said they were able to achieve orgasm. Expectations were fulfilled in 74%, partially fulfilled in 21%, and not met in 5%. Only two patients (4%) regretted surgery, and two patients had minor surgical complications. Conclusion. In a selected group of women with acquired sensation of a wide vagina, colporrhaphy seems to improve symptoms and enhance sexual gratification in a majority of the women. A controlled trial with a longer follow-up is needed for a proper evaluation.

Sexual dysfunction in men with chronic prostatitis/chronic pelvic pain syndrome: improvement after trigger point release and paradoxical relaxation training.

Anderson RU, Wise D, Sawyer T, Chan CA

J Urol. 2006 Oct;176(4):1534-9.

PURPOSE: The impact of chronic pelvic pain syndrome on sexual function in men is underestimated. We quantified sexual dysfunction (ejaculatory pain, decreased libido, erectile dysfunction and ejaculatory difficulties) in men with chronic pelvic pain syndrome and assessed the effects of pelvic muscle trigger point release concomitant with paradoxical relaxation training. **MATERIALS AND METHODS:** We treated 146 men with a mean age of 42 years who had had refractory chronic pelvic pain syndrome for at least 1 month with trigger point release/paradoxical relaxation training to release trigger points in the pelvic floor musculature. The Pelvic Pain Symptom Survey and National Institutes of Health-Chronic Prostatitis Symptom Index were used to document the severity/frequency of pain, urinary and sexual symptoms. A global response assessment was done to record patient perceptions of overall therapeutic effects at an average 5-month followup. **RESULTS:** At baseline 133 men (92%) had sexual dysfunction, including ejaculatory pain in 56%, decreased libido in 66%, and erectile and ejaculatory dysfunction in 31%. After trigger point release/paradoxical relaxation training specific Pelvic Pain Symptom Survey sexual symptoms improved an average of 77% to 87% in responders, that is greater than 50% improvement. Overall a global response assessment of markedly or moderately improved, indicating clinical success, was reported by 70% of patients who had a significant decrease of 9 (35%) and 7 points (26%) on the National Institutes of Health-Chronic Prostatitis Symptom Index ($p < 0.001$). Pelvic Pain Symptom Survey sexual scores improved 43% with a markedly improved global response assessment ($p < 0.001$) but only 10% with moderate improvement ($p = 0.96$). **CONCLUSIONS:** Sexual dysfunction is common in men with refractory chronic pelvic pain syndrome but it is unexpected in the mid fifth decade of life. Application of the trigger point release/paradoxical relaxation training protocol was associated with significant improvement in pelvic pain, urinary symptoms, libido, ejaculatory pain, and erectile and ejaculatory dysfunction.

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Pediatric anorectal impalement with bladder rupture: case report and review of the literature.

Kim S, Linden B, Cendron M, Puder M

J Pediatr Surg. 2006 Sep;41(9):E1-3.

Rectal impalement involves foreign body trauma to the anus or rectum resulting in intra- or extraperitoneal rupture. Evaluation of suspected rectal impalement injury involves careful history and physical examination. Ruling out rectal perforation in patients with reported impalement is critical even if there is no evidence of trauma to the perineum. There are few reports on pediatric impalement and only 1 reported case of pediatric rectal impalement with bladder rupture. We report a rectal impalement with extraperitoneal bladder injury in a 12-year-old boy and review the literature on treatment of these injuries.

Celecoxib for the prevention of colorectal adenomatous polyps.

Arber N, Eagle CJ, Spicak J, Racz I, Dite P, Hajer J, Zavoral M, Lechuga MJ, Gerletti P, Tang J, Rosenstein RB, Macdonald K, Bhadra P, Fowler R, Wittes J, Zauber AG, Solomon SD, Levin B

N Engl J Med. 2006 Aug 31;355(9):885-95.

BACKGROUND: Overexpression of cyclooxygenase 2 (COX-2) has been associated with colorectal adenomatous polyps and cancer, prompting researchers to propose its inhibition as a chemopreventive intervention. **METHODS:** The Prevention of Colorectal Sporadic Adenomatous Polyps trial was a randomized, placebo-controlled, double-blind study of the COX-2 inhibitor celecoxib given daily in a single 400-mg dose. At 107 centers in 32 countries, we randomly assigned 1561 subjects who had had adenomas removed before enrollment to receive celecoxib (933 subjects) or placebo (628 subjects) daily, after stratification according to the use or nonuse of low-dose aspirin. The primary outcome was detection of adenomas at either year 1 or year 3 by colonoscopy and was compared among the groups with the use of the Mantel-Cox test. **RESULTS:** Colonoscopies were performed at year 1 on 88.7 percent of the subjects who had undergone randomization and at year 3 on 79.2 percent. Of the 557 subjects in the placebo group and the 840 subjects in the celecoxib group who were included in the efficacy analysis, 264 and 270, respectively, were found to have at least one adenoma at year 1, at year 3, or both. The cumulative rate of adenomas detected through year 3 was 33.6 percent in the celecoxib group and 49.3 percent in the placebo group (relative risk, 0.64; 95 percent confidence interval, 0.56 to 0.75; $P < 0.001$). The cumulative rate of advanced adenomas detected through year 3 was 5.3 percent in the celecoxib group and 10.4 percent in the placebo group (relative risk, 0.49; 95 percent confidence interval, 0.33 to 0.73; $P < 0.001$). Adjudicated serious

cardiovascular events occurred in 2.5 percent of subjects in the celecoxib group and 1.9 percent of those in the placebo group (relative risk, 1.30; 95 percent confidence interval, 0.65 to 2.62). CONCLUSIONS: The use of 400 mg of celecoxib once daily significantly reduced the occurrence of colorectal adenomas within three years after polypectomy. (ClinicalTrials.gov number, NCT00141193 [ClinicalTrials.gov].).

[Perianal and rectal impalement injuries.]

Joos AK, Herold A, Palma P, Post S
Chirurg. 2006 Aug 4;.

Perianal impalement injuries with or without involvement of the anorectum are rare. Apart from a high variety of injury patterns, there is a multiplicity of diagnostic and therapeutic options. Causes of perianal impalement injury are gunshot, accidents, and medical treatment. The diagnostic work-up includes digital rectal examination followed by rectoscopy and flexible endoscopy under anaesthesia. We propose a new classification for primary extraperitoneal perianal impalement injuries in four stages in which the extension of sphincter and/or rectum injury is of crucial importance. Therapeutic aspects such as wound treatment, enterostomy, drains, and antibiotic treatment are discussed. The proposed classification encompasses recommendations for stage-adapted management and prognosis of these rare injuries.

The effect of purified micronized flavonoid fraction on the healing of anastomoses in the colon in rats.

Inan A, Sen M, Koca C, Akpınar A, Dener C
Surg Today. 2006;36(9):818-22.

PURPOSE: Anastomotic leakage of colonic and rectal anastomoses is a major complication after large intestine surgery. Many factors influence the healing of colon anastomoses. Flavonoids have been recognized for centuries as physiologically active constituents that are used to treat human diseases. We studied the effects of a clinically used, micronized, purified flavonoid fraction on the healing of colonic anastomosis in rats. METHODS: Male Sprague-Dawley rats were used. The flavonoid group of rats received 100 mg/kg per day of Daflon for 14 days until surgery. Thereafter, a resection and anastomosis were performed. The bursting pressure of the anastomoses and the hydroxyproline levels of the perianastomotic tissue were determined to evaluate the healing on the third and seventh days of surgery for both flavonoid and control groups. RESULTS: The bursting pressure of the flavonoid group was higher on the seventh day. The hydroxyproline levels of the flavonoid group were significantly higher than in the control group on both the third and seventh days after surgery. CONCLUSIONS: Although the micronized purified flavonoid fraction has some inhibitory properties on the healing of the anastomosis, its net effect was to obtain a better anastomotic healing of the colon in rats.

Laparoscopic colon surgery: past, present and future.

Martel G, Boushey RP
Surg Clin North Am. 2006 Aug;86(4):867-97.