FORUM
Instructions for Obtaining Journal CME Credit.
Anesthesiology. 2006 Jun;104(6):1359-60.

Consent in surgery.
Wheeler R
Ann R Coll Surg Engl. 2006 May;88(3):261-4.
A review of consent for surgery is timely. As the length of surgeons' training diminishes, despite the increasing interest in the content of the surgical curriculum, the law governing the process of gaining consent has been given scant attention. The advent of non-medically qualified surgical practitioners raises questions about the breadth of knowledge that is required to ensure that valid consent is obtained. Consent is as fundamental as any other basic principle on which surgical practice relies, and its use in patient care is a clinical skill.The 'traditional' approach to consent contained some negative elements. A doctor who was incapable of performing the proposed operation often obtained consent. In a genuine attempt to protect patients from anxiety, the rare-but-grave potential complications were sometimes not discussed. There was uncertainty about what should properly be disclosed, compounded by conflicting messages from the courts. The consent was sometimes taken from people who were ineligible to provide it.These could be viewed as aberrations, and some persist. Having clarified the necessity for consent, this review concludes that it should be obtained by the operating surgeon. The threshold for interventions that need formal consent is discussed, together with the legal tests for capacity. In considering the recent law, it becomes clear that any potential complication that the reasonable patient would need to take into consideration before deciding to give their consent is one that should be disclosed.

1 – THE PELVIC FLOOR
Stimulating aspects of sacral nerve stimulation.
Staskin DR
J Urol. 2006 Jun;175(6):1991-2.

Parity, mode of delivery, and pelvic floor disorders.
Lukacz ES, Lawrence JM, Contreras R, Nager CW, Luber KM
Obstet Gynecol. 2006 Jun;107(6):1253-60.
OBJECTIVE: This study aimed to assess the associations between parity, mode of delivery, and pelvic floor disorders. METHODS: The prevalence of pelvic organ prolapse, stress urinary incontinence, overactive bladder, and anal incontinence was assessed in a random sample of women aged 25-84 years by using the validated Epidemiology of Prolapse and Incontinence Questionnaire. Women were categorized as nulliparous, vaginally parous, or only delivered by cesarean. Adjusted odds ratios and 95% confidence intervals (CIs) for each disorder were calculated with logistic regression, controlling for age, body mass index, and parity. RESULTS: In the 4,458 respondents the prevalence of each disorder was as follows: 7% prolapse, 15% stress urinary incontinence, 13% overactive bladder, 25% anal incontinence, and 37% for any one or more pelvic floor disorders. There were no significant differences in the prevalence of disorders between the cesarean delivery and nulliparous groups. The adjusted odds of each disorder increased with vaginal parity compared with cesarean delivery: prolapse = 1.82 (95% CI 1.04-3.19), stress urinary incontinence = 1.81 (95% CI 1.25-2.61), overactive bladder = 1.53 (95% CI 1.02-2.29), anal incontinence = 1.72 (95% CI 1.27-2.35), and any one or more pelvic floor disorders = 1.85 (95% CI 1.42-2.41). Number-needed-to-treat analysis revealed that 7 women would have to deliver only by cesarean delivery to prevent one woman from having a pelvic floor disorder. CONCLUSION: The risk of pelvic floor disorders is independently associated with vaginal delivery but not with parity alone. Cesarean delivery has a protective effect, similar to nulliparity, on the development of pelvic floor disorders when compared with vaginal delivery. LEVEL OF EVIDENCE: II-2.

2 – FUNCTIONAL ANATOMY
Cerebral representation of the anorectum using functional magnetic resonance imaging.
Bittorf B, Ringler R, Forster C, Hohenberger W, Matzel KE

Br J Surg. 2006 Jun 6;.
BACKGROUND:: Anorectal continence depends not only on the organs of continence but also on cerebral control. There are relatively few data regarding cerebral processing of anorectal continence. METHODS:: Thirteen healthy subjects underwent rectal distension to cause urge increasing to discomfort during functional magnetic resonance imaging (fMRI). In addition, a painful heat stimulus was applied to the skin of the anterior abdominal wall in the dermatome corresponding to the rectum. Voluntary contraction of the anal sphincter was also performed. Subjective rating of stimulus intensity was recorded. Evaluation of the data used a general linear model with Brain Voyager(trade mark). RESULTS:: Subjective sensation of discomfort increased during repeated rectal distension and caused activation in the anterior cingulate gyrus, insula, thalamus and secondary somatosensory cortex seen on fMRI. Perception of rectal urge and discomfort activated the same cerebral regions with differing intensity. Application of a painful thermal stimulus in the corresponding dermatome showed a modification of the response. Voluntary contraction of the anal sphincter led to activation of the motor cortex and increased activity in the supplementary motor cortex and the insula. CONCLUSION:: Cerebral representation of the anorectum as mapped by fMRI is intricate and reflects the complexity of the continence mechanism. Copyright (c) 2006 British Journal of Surgery Society Ltd. Published by John Wiley & Sons, Ltd.

Drugs affecting visceral sensitivity: ready for the prime time?
Delvaux MM, Gay G
Dig Dis. 2006;24(1-2):99-104.
Visceral sensitivity has been recognized over the last decade as a frequent pathophysiological component of functional bowel disorders. Studies in animals and humans have identified numerous neurotransmitters involved in the processing of sensations from the gut to the brain. However, up to now none of them has actually been proven to have a marked clinical efficacy and the benefit comes rather from their action of bowel disturbances. Reproducible tests are lacking to detect visceral hypersensitivity in humans and distension tests are difficult to undertake in a clinical setting. Therefore, abnormal visceral sensitivity may not be regarded as a tool to select IBS patients as candidates for a given treatment.

Molecular characterization and distribution of motilin family receptors in the human gastrointestinal tract.
Takeshita E, Matsuura B, Dong M, Miller LJ, Matsui H, Onji M
J Gastroenterol. 2006 Mar;41(3):223-30.
BACKGROUND: Motilin and ghrelin have been recognized as important endogenous regulators of gastrointestinal motor function in mammals, mediated respectively by the motilin receptor and by the closely related ghrelin receptor. The aims of this study were to explore the distribution of motilin and ghrelin receptors along the human gastrointestinal tract and to establish the molecular nature of the human motilin receptor. METHODS: Post mortem and surgical human tissue specimens with no hemorrhage, necrosis, or tumor were obtained from various parts of the gastrointestinal tract. We analyzed levels of expression of mRNA for motilin and ghrelin receptors and examined their molecular identities. Portions of some specimens were also studied by immunohistochemistry for expression of the motilin and ghrelin receptor. RESULTS: The long form of the motilin receptor, but not the short form, was expressed in all parts of the gastrointestinal tract, and expressed at higher levels in muscle than in mucosa. Motilin receptor immunoreactivity was present in muscle cells and the myenteric plexus, but not in mucosal or submucosal cells. In contrast, ghrelin receptor mRNA was expressed equally in all parts of the gastrointestinal tract, with similar levels of expression in mucosal and muscle layers. CONCLUSIONS: Both the motilin and ghrelin receptors are expressed along the human gastrointestinal tract, but they have clearly distinct distributions in regard to both level and layer. The diffuse muscle expression of the motilin receptor, at both the levels of the gene and the protein product, along the entire gastrointestinal tract makes it a useful potential target for motilide drugs for dysmotility.

3 – DIAGNOSTICS 2006 05

Effect of vaginal delivery on endosonographic anal sphincter morphology.
Starck M, Bohe M, Valentin L

Eur J Obstet Gynecol Reprod Biol. 2006 May 17;.
OBJECTIVE: To describe the effect of vaginal delivery with no clinically recognized sphincter tear on endosonographic anal sphincter morphology and sphincter pressure and to relate endosonographic results to anal sphincter pressure and anal incontinence score. STUDY DESIGN: Thirty-two nullipara underwent anal endosonography and anal manometry in the third trimester of pregnancy, 2 weeks and 6 months post-partum. The sphincter defect scores (1-16) and the thickness and length of the sphincters were measured by endosonography, and sphincter pressures and manometric sphincter lengths were determined. The Wexner incontinence score (1-20) was used to classify anal incontinence 6 months post-partum. RESULTS: Five (16%) women had small endosonographic anal sphincter defects (score 3-4) before delivery. Eight women (25%; confidence interval 11-43%) had new defects detected post-partum, five small, one moderate (score 7), and two large (score 10-11). Six (75%) of eight women with new defects post-partum had undergone episiotomy versus five (21%) of 24 women with no new defects (p=0.02). Six months after delivery 16 (50%) women reported anal incontinence, and there was a positive correlation between the endosonographic defect score 6 months post-partum and the Wexner incontinence score. The sphincter was significantly longer during pregnancy than 6 months post-partum. CONCLUSION: New sphincter defects may arise after vaginal delivery without any clinically recognizable sphincter tear. There is a positive correlation between the endosonographic defect score 6 months post-partum and the Wexner incontinence score.

The sensitivity and specificity of a simple test to distinguish between urge and stress urinary incontinence.
Brown JS, Bradley CS, Subak LL, Richter HE, Kraus SR, Brubaker L, Lin F, Vittinghoff E, Grady D
Ann Intern Med. 2006 May 16;144(10):715-23.
BACKGROUND: Urinary incontinence is common in women. Because treatments differ, urge incontinence should be distinguished from stress incontinence. To make this distinction, current guidelines recommend an extensive evaluation that is too time-consuming for primary care practice. OBJECTIVE: To test the accuracy of a simple questionnaire to categorize type of urinary incontinence in women. DESIGN: Multicenter, prospective study of the accuracy of the 3 Incontinence Questions (3IQ) compared with an extended evaluation to distinguish between urge incontinence and stress incontinence. SETTING: 5 academic medical centers in the United States. PARTICIPANTS: 301 women enrolled from April to December 2004 who were older than 40 years of age (mean age, 56 years [SD, 11]) with untreated incontinence for an average of 7 years (SD, 7) and a broad range of incontinence severity. MEASUREMENTS: All participants included in the analyses answered the 3IQ questionnaire, and a urologist or urogynecologist who was blinded to the responses performed the extended evaluation. Sensitivity, specificity, and likelihood ratios were determined for the 3IQ. RESULTS: For classification of urge incontinence and with the extended evaluation as the gold standard, the 3IQ had a sensitivity of 0.75 (95% CI, 0.68 to 0.81), a specificity of 0.77 (CI, 0.69 to 0.84), and a positive likelihood ratio of 3.29 (CI, 2.39 to 4.51). For classification of stress incontinence, the sensitivity was 0.86 (CI, 0.79 to 0.90), the specificity was 0.60 (CI, 0.51 to 0.68), and the positive likelihood ratio was 2.13 (CI, 1.71 to 2.66). LIMITATIONS: Participants were enrolled by urologists and urogynecologists at academic medical centers. CONCLUSIONS: The 3IQ questionnaire is a simple, quick, and noninvasive test with acceptable accuracy for classifying urge and stress incontinence and may be appropriate for use in primary care settings. Similar studies are needed in other populations. We also need a clinical trial comparing the outcomes of treatments based on the 3IQ and the extended evaluation.

Italian Validation of the Urogenital Distress Inventory and Its Application in LUTS Patients.
Artibani W, Pesce F, Prezioso D, Scarpa RM, Zattoni F, Tubaro A, Rizzi CA, Santini AM, Simoni L
Eur Urol. 2006 May 4;.
OBJECTIVES: The objective of this study was to validate the Italian version of the Urogenital Distress Inventory (UDI) in a sample of women with lower urinary tract symptoms (LUTS). METHODS: The linguistic validation of the questionnaire was performed through a multistep process: backward and forward translations coordinated by clinical investigators, followed by a pretest. The final version was administered to a larger sample of female patients, aged 18 years or older who had been having LUTS for at least 3 months, numbering 53 subjects. To evaluate test-retest reliability, patients were re-rated after 1 week. To test questionnaire's capacity to discriminate women with or without LUTS (cases and controls, respectively), a sample of 53 healthy women was enrolled. A 72-h voiding diary was used as a gold standard and compared

with the UDI. RESULTS: The correlation coefficient between ratings was >/=0.80, and the discriminant power between cases and controls was confirmed. The UDI showed good internal consistency for all domains, except irritative symptoms (total score's Cronbach alpha=0.86). Factor analytic structure revealed urinary incontinence to be opposite to the other urologic symptoms, with bed wetting being loaded separately. The average daily number of urgent micturitions was higher in patients who reported they "experience a strong feeling of urgency to empty bladder" in the UDI than those ones who did not (p<0.01). CONCLUSIONS: The Italian version of the UDI is a valid and robust instrument, which can now be used reliably in daily practice and clinical research.

Value of leak point pressure study in women with incontinence.
Sinha D, Nallaswamy V, Arunkalaivanan AS
J Urol. 2006 Jul;176(1):186-8.
PURPOSE: We assessed the relationship between cough leak point pressure and Valsalva leak point pressure with stress incontinence and detrusor overactivity. MATERIALS AND METHODS: This prospective study was performed on 109 women with urinary incontinence who underwent urodynamic assessment from December 2003 to June 2005. We recorded cough leak point pressure and Valsalva leak point pressure by asking the patient to cough and to perform a Valsalva maneuver at maximum cystometric capacity until urine loss was directly observed and recorded by the machine. Women with normal urodynamic results or spontaneous voiding during examination were excluded fro analysis. Results were entered in the urodynamic database and analyzed using SPSS(R) release 13.0. RESULTS: Of the 109 women in the study 61 (56%) had stress incontinence, 21 (19%) had detrusor overactivity and 27 (25%) had mixed incontinence. All women with stress incontinence demonstrated leak at cough leak point pressure but 40 women (66%) did not leak with the Valsalva maneuver. Of the 21 patients who had detrusor overactivity 16 (76%) did not leak at cough leak point pressure whereas 17 (81%) leaked with the Valsalva maneuver. In the group of 27 women with mixed incontinence all leaked with cough at cough leak point pressure but only 17 (63%) leaked with the Valsalva maneuver. CONCLUSIONS: Women with stress incontinence diagnosed with urodynamics leaked more at cough leak point pressure than the Valsalva maneuver, and women with detrusor overactivity leaked less at cough leak point pressure and more with the Valsalva maneuver.

Anal Manometry: A Comparison of Techniques.
Simpson RR, Kennedy ML, Nguyen MH, Dinning PG, Lubowski DZ
Dis Colon Rectum. 2006 May 29;.
PURPOSE: Methods of anal manometry vary between centers, resulting in potential difficulties in interpretation of results. This study compared several accepted manometric techniques in healthy control subjects and in patients with fecal incontinence. METHODS: Eleven patients with fecal incontinence (M:F = 3:8; mean age = 67 years) and ten healthy control subjects (M:F = 3:7; mean age = 64 years) underwent anal manometry using five different methods: 1) water-perfused side hole; 2) water-perfused end hole; 3) microtransducer; 4) microballoon; 5) portable Peritron. Using a station pull-through technique, anal pressures (resting, squeeze, and cough pressures) were recorded at 1-cm intervals from rectum to anal verge, as well as radial pressures in four quadrants for Methods 1 and 2. RESULTS: Water perfusion side hole recorded slightly higher maximal resting pressures; however, there were no significant differences between any of the methods. In healthy control subjects, distal maximal squeeze pressures were significantly higher ($P < 0.05$) than proximally as measured by microtransducer. There were slight (nonsignificant) variations in radial pressures with water perfusion and microtransducer. Peritron values for maximum resting pressure and maximum squeeze pressure were lower than those recorded by water perfusion side hole by a factor of 0.8. CONCLUSIONS: There is no significant variation in anal pressure recordings using standard manometry techniques. Variations in radial pressures are slight and not significant in clinical studies. Results obtained with portable nonperfusion systems must be interpreted appropriately.

Measurement of the Anal Cushions by Transvaginal Ultrasonography.
Nicholls MJ, Dunham R, O'herlihy S, Finan PJ, Sagar PM, Burke D
Dis Colon Rectum. 2006 May 29;.
PURPOSE: The anal cushions are believed to contribute to the anal continence mechanism. Transvaginal ultrasound previously has been used to visualize the anal sphincters. Using this method, visualization of the

anal cushions has been described but no quantitation of the cushions has been undertaken. Because impairment of the anal cushion function may lead to anal incontinence, this study was designed to evaluate the use of transvaginal ultrasound to measure the anal cushions. METHODS: Patients attending a gynecologic ultrasound list were recruited into the study. By measuring cross-sectional areas, a cushion:canal ratio was calculated. RESULTS: Fifty females were studied. Results showed that the area enclosed within the internal anal sphincter had a median of 2.37 cm(2) (interquartile range, 1.76-2.61). The cushion:canal ratio was 0.66 (interquartile range, 0.57-0.7). Interobserver error was 0.98 and intraobserver error 0.99. CONCLUSIONS: In this pilot study, we conclude that transvaginal ultrasonography is a reliable method of measuring the anal cushions in healthy control subjects. A narrow normal range can be established. This may be compared later with anal cushion size in patients who have symptoms of incontinence and may be used to assess changes in the size of the cushions in response to recently described anal cushion bulking agents.

A New Method of Assessing Anal Sphincter Integrity Using Inverted Vectormanometry.
Kaur G, Gardiner A, Duthie GS
Dis Colon Rectum. 2006 May 19;.
PURPOSE: Vectorgraphy as an integrated mapping of radial pressure profiles of the anal canal has been used to attempt identification of pressure-related defects with doubtful reliability since vectorgraphs bear no resemblance to endoanal ultrasound scans at similar levels in the anal canal. This study aimed to devise a technique to enable vectorgraphy to be more representative of sphincter function and integrity. METHODS: Vectormanometry was performed in 50 patients with anorectal disorders using an Arndorfer pneumohydraulic system. "Normal" three-dimensional manometric images of each 0.5 cm of the anal sphincter were computer-generated by plotting anal pressures at rest and during squeeze radially around a central zero axis. The graphs were replotted with zero at the periphery and maximal anal pressure at the center. Both this ("inverted") and "normal" vectorgraphs were compared with endoanal ultrasound images at similar levels, assessing both internal and external anal sphincters. RESULTS: Standard vectormanometry produced excellent pictures of pressures throughout the anal canal; the anatomy however bore no resemblance to the pictures produced by endoanal ultrasound. The inverted vectographs showed a much better correlation with endoanal ultrasound at each 0.5-mm level of the anal canal, for both squeeze pressure graphs and external sphincter correlations and for resting pressure graphs and internal sphincter correlations. CONCLUSIONS: Accurate assessment of sphincter integrity is not possible when interpreting the vectormanometry graphs in the current format; however, inverted vectorgraphy gives good correlations with endoanal ultrasound and provides combined functional (pressure measurement) and anatomic (three-dimensional profile) information regarding the anal canal.

Fecal occult blood testing: Forget the finger!
Mishkin DS, Schroy PC 3rd
Gastroenterology. 2005 Jul;129(1):384-6.

4 – PROLAPSES 2006 05
Clinical implications of the biology of grafts: conclusions of the 2005 IUGA Grafts Roundtable.
Davila GW, Drutz H, Deprest J
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Apr;17 Suppl 7:51-5.
With few exceptions, the current expansion of graft utilization in pelvic reconstructive surgery is not a product of evidence-based medicine. Abdominal sacrocolpopexy and suburethral sling procedures are two situations under which synthetic graft utilization is indicated, based on randomized prospective trials and reported clinical outcomes. Otherwise, indications and contraindications for graft utilization are unclear. Current published data on the biology of synthetic and biologic grafts are limited and overall not very helpful to the reconstructive surgeon who is faced with the selection of a graft for use during a reconstructive procedure. This Roundtable presented the opportunity for a series of basic science researchers to present their data to a group of reconstructive surgeons and provide publishable background information on the various currently available grafts. The occurrence of healing abnormalities after graft implantation is becoming increasingly recognized as a potentially serious problem. To date, definitions and a classification system for healing

abnormalities do not exist. Based on the input from basic scientists and experienced surgeons, a simple classification is suggested based on the site of healing abnormality, timing relative to graft implantation, presence of inflammatory changes, and the viscera into which the graft is exposed. Many opportunities for clinical and basic science research exist. As the use of grafts in reconstructive surgery is expanded, surgeons are encouraged to familiarize themselves with currently published data, and determine whether a graft should, or should not be, utilized during a reconstructive procedure, and if so, the type of graft best indicated in each specific clinical situation.

Evaluation of a unique bovine collagen matrix for soft tissue repair and reinforcement.
Connolly RJ
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Apr;17 Suppl 7:44-7.
Veritas((R)) Collagen Matrix, a product of Synovis Surgical Innovations, is derived from bovine pericardium. It can be used for a number of applications including body wall repair and replacement. In this study, we evaluated its efficacy as an adhesion barrier in a rabbit model of uterine horn surgery. When Veritas((R)) was placed on the uterine horn stump it reduced the incidence of adhesions by 50% (n.s.) compared with untreated controls. Histologic analysis of recovered material showed that the surface was covered with a monolayer of mesothelial-like cells. In addition, there was an infiltration of host cells into the matrix of the product, which suggests a replacement of the material with host tissue.

Tissue engineering a clinically useful extracellular matrix biomaterial.
Hiles M, Hodde J
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Apr;17 Suppl 7:39-43.
Implantable biomaterials are one of the most useful tools in the surgeon's armamentarium, yet there is much room for improvement. Chronic pain, tissue erosion, and late infections are just a few of the serious complications that can occur with conventional, inert materials. In contrast, tissue-inductive materials exist today. Combinations of biologically important molecules for directing cell growth and providing structural stability can be found in naturally occuring extracellular matrices. These "soft-tissue skeletons" of Mother Nature can be harvested, processed, and provided in a medically safe and biologically active form for repairing many different tissues in the human body. The future of surgical practice may well be determined by how well these new implant materials recreate the tisues they replace.

Biology of polypropylene/polyglactin 910 grafts.
Barbolt TA
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Apr;17 Suppl 7:26-30.
The biological evaluation of polypropylene (PP)/polyglactin 910 grafts was reviewed including regulatory considerations, biocompatibility assessment, tissue reaction and integration, and infection potentiation of these synthetic materials used in urogynecological surgical procedures. The physical characteristics of the grafts including base composition, monofilament vs multifilament, and non-absorbable vs absorbable materials were compared. Grafts were implanted in rats to evaluate the tissue reaction and integration characteristics of the materials over time. Grafts were also implanted in mice and inoculated with Staphylococcus aureus to assess the potential for bacterial attachment and growth. The tissue reaction to PP/polyglactin 910 grafts was characterized by minimal to mild inflammation with some qualitative differences related to the physical construction of the different grafts. The tissue reaction to polyglactin 910 mesh was also mild but resolved after the material was absorbed 70 days post-implantation. The integration of PP/polyglactin 910 grafts by fibrosis with surrounding tissue was initially mild for all materials but decreased over time for the lightweight and multifilament PP-based grafts, including a graft with an absorbable polyglactin 910 component. Residual fibrosis was not observed for the graft constructed from polyglactin 910 alone. Grafts constructed from PP did not potentiate infection after inoculation with S. aureus whereas the number of bacteria recovered from naturally derived collagen-based materials increased by three to four logs. The biological performance of PP/polyglactin 910 grafts is dependent on multiple factors including the composition and physical construction of the base materials, the overall biocompatibility of the materials, particularly tissue reaction and integration of the grafts, and the resistance of the grafts to bacterial attachment and growth.

The biology behind fascial defects and the use of implants in pelvic organ prolapse repair.
Deprest J, Zheng F, Konstantinovic M, Spelzini F, Claerhout F, Steensma A, Ozog Y, De Ridder D
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Apr;17 Suppl 7:16-25.
Implant materials are increasingly being used in an effort to reduce recurrence after prolapse repair with native tissues. Surgeons should be aware of the biology behind both the disease as well as the host response to various implants. We will discuss insights into the biology behind hernia and abdominal fascial defects. Those lessons from "herniology" will, wherever possible, be applied to pelvic organ prolapse (POP) problems. Then we will deal with available animal models, for both the underlying disease and surgical repair. Then we will go over the features of implants and describe how the host responds to implantation. Methodology of such experiments will be briefly explained for the clinician not involved in experimentation. As we discuss the different materials available on the market, we will summarize some results of recent experiments by our group.

Evolution of biological and synthetic grafts in reconstructive pelvic surgery.
Dwyer PL
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Apr;17 Suppl 7:10-5.
Surgery is an evolving science in the attempt to make surgical procedures more effective, safer, and less invasive. Recurrence and subsequent re-operation for stress incontinence and prolapse has been reported to be necessary in one of three patients, so there is a need for improvement [1]. In reconstructive pelvic surgery (RPS), the use of biological and synthetic grafts for the transabdominal and transvaginal treatment of pelvic organ prolapse (POP) or stress urinary incontinence (SI) has improved long-term support and function after surgery. However, the potential benefits of using grafts need to be carefully balanced against the risks of using materials foreign to the patient's body. Pelvic organ prolapse develops secondary to defective endopelvic fascial and muscular support. The levator ani provides resting tonic muscular support for all three pelvic compartments. Once neuromuscular damage occurs, extra strain is placed on the connective tissue supports, which may also subsequently fail. To date, there is no surgery that adequately addresses the issue of neuromuscular damage of the pelvic floor musculature. In conventional POP surgery, defective support is repaired by suturing of the patient's own connective tissue, fascia, or ligaments. The rationale for the use of grafts is to reinforce and strengthen pelvic organ repairs similar to the use of grafts to strengthen abdominal hernia repair.

Vaginal evisceration.
Khunda A, Jones D
Am J Obstet Gynecol. 2006 Jun;194(6):1744-5; author reply 1745. Epub 2006 Apr 21.

Gore-Tex mesh pelvic occlusion and secondary colpopexy: A new surgical technique for posthysterectomy vaginal vault prolapse.
Clavero PA, Guerrero JA, Salamanca A
Eur J Obstet Gynecol Reprod Biol. 2006 May 1;126(1):113-5.
OBJECTIVE: This article presents and discusses a new surgical abdominal technique for the treatment of posthysterectomy vaginal vault prolapse. METHOD: It provides support of the peritoneal surface of the pelvic floor by means of a Gore-Tex mesh, which closes this space. The vaginal vault is fixed to the centre of the mesh. STUDY DESIGN: Descriptive study. RESULTS: Sixteen patients with vaginal vault prolapse were operated on and postoperative follow-up time ranged from 16 to 46 months. There was only one case in which the mesh had to be removed due to infection and posterior erosion of the vaginal wall, and no cases of recurrent vaginal vault prolapse. CONCLUSION: A Gore-Tex mesh, placed at the top of the vaginal vault and extending across the pelvic floor, can effectively treat posthysterectomy vault prolapse.

Using Veronikis ligature carrier to simplify transvaginal sacrospinous colpopexy.
Chang WC, Huang SC, Sheu BC, Hsu WC, Torng PL, Chow SN, Chang DY
Acta Obstet Gynecol Scand. 2006;85(6):721-5.
Background. Pelvic organ prolapse is a common problem in women and often requires surgical management. Sacrospinous colpopexy (SSC) requires significant expertise, especially in placement of the suture into sacrospinous ligament (SSL). Methods. Veronikis ligature carrier (VLC) designed for SSC was

used to facilitate suture placement and retrieval under direct visualization within the confines of the pararectal space. From December 2003 through March 2004, SSC was performed in 20 patients with VLC as part of their site-specific reconstructive pelvic surgery (group A). The historic control group (group B) included 15 patients who underwent SSC with a straight needle holder between March 1999 and March 2001. Results. There was no significant difference in age, gravity, parity, body mass index, blood loss, and hospital stay in both groups with the diagnosis of uterovaginal prolapse or posthysterectomy vaginal vault prolapse. The median operation time for group A and group B was 35min (range 25-40min) and 75min (range 45-128min), respectively (P<0.001). It took less than 5min to introduce two sutures through the SSL by VLC in group A but 20-40 min by straight needle holder in group B. There was no injury to the bladder, rectum, pudendal nerve, or major pelvic vessels. Conclusions. VLC allows rapid and safe introduction of the suspending suture through the SSL and makes SSC easy to perform.

Physical activity in women planning sacrocolpopexy.
Nygaard I, Handa V, Brubaker L, Borello-France D, Wei J, Wells E, Weber AM
Int Urogynecol J Pelvic Floor Dysfunct. 2006 May 11;.
This study describes preoperative physical activity in 314 stress-continent women with prolapse planning sacrocolpopexy. Seventy-six percent reported that they engaged in mild, 60% in moderate, and 26% in strenuous exercise (counts are not mutually exclusive). Activity frequencies did not generally differ by prolapse stage. Prolapse substantially interfered with exercise or recreation in 27% of women, household work or yard work in 19%, and work outside the home in 8%. Compared to women with less symptom distress, more women with greater symptom distress reported that prolapse interfered with household/yard work (43 vs 5%, p<0.0001), working outside the home (29 vs 8%, p<0.005), and recreation/exercise (51 vs 10%, p<0.0001). Prolapse stage was not associated with interference with household/yard work (p=0.28) or work outside home (p=0.89). Although prolapse stage is associated with interference with recreation (p=0.02), this association is not consistently positive : stage II, 42%; stage III, 22%; and stage IV, 32%.

Perioperative complications in abdominal sacrocolpopexy and vaginal sacrospinous ligament fixation procedures.
Demirci F, Ozdemir I, Somunkiran A, Topuz S, Iyibozkurt C, Duras Doyran G, Kemik Gul O, Gul B
Int Urogynecol J Pelvic Floor Dysfunct. 2006 May 11;.
This study assessed perioperative complications in abdominal sacrocolpopexy and vaginal sacrospinous ligament fixation procedures. Perioperative complications were defined as any complication occurring during surgery or the first 6 weeks postoperatively. Forty-five patients underwent abdominal procedures (20 sacrohysteropexy and 25 sacrocolpopexy) and 60 patients underwent vaginal sacrospinous fixation. Of the 105 patients, 13 had vaginal vault prolapse. In the abdominal group, one bladder injury, four hemorrhages, and three wound dehiscences occurred. In the vaginal group, one rectal injury and one postoperative vaginal vault infection occurred. Major and minor complications were more frequent in the abdominal group than in the vaginal group. Blood loss was not significantly different. The operating time and hospital stay in the abdominal group were significantly longer than in the vaginal group. In conclusion, abdominal sacrocolpopexy had a higher rate of perioperative complications and longer hospital stay and operating time.

Management of the neglected vaginal ring pessary.
Fernando RJ, Sultan AH, Thakar R, Jeyanthan K
Int Urogynecol J Pelvic Floor Dysfunct. 2006 May 13;.
We present two cases of vaginal pessaries left in situ for prolonged periods and subsequent impaction that were managed differently. One was partially epithelialized and removed in the outpatient clinic by a new technique whereby the ring pessary was divided by a bone-cutter and passed through the epithelial tunnel without anesthesia. The second, which was a completely epithelialized metal ring pessary, was removed under anesthesia. Resulting fibrosis can cure the prolapse.

Pelvic organ prolapse: demographics and future growth prospects.
Drutz HP, Alarab M
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Apr;17 Suppl 7:6-9.
Pelvic Organ Prolapse (POP) is the hidden epidemic. Demographic studies have shown that women over

the age of eighty are the fastest growing population segment in the United States and Canada. Over the next thirty years the rate of women who will seek treatment for POP will double. Risks for the development of POP have been categorized into factors that predispose, incite, promote, and decompensate. Connective tissue disorders may play a role in the pathogenesis which may involve a reduction in total collagen content secondary to increased collagenolytic activity. Eventually clinicians may be able to identify women who may be genetically predetermined to develop POP. The role of adjuvant materials in performing reconstructive pelvic surgery may improve success rates, but evidence based medicine and randomized controlled trials are currently lacking.

Laparoscopic rectal prolapse surgery combined with short hospital stay is safe in elderly and debilitated patients.
Carpelan-Holmstrom M, Kruuna O, Scheinin T
Surg Endosc. 2006 May 13;.
BACKGROUND: We report the results of patients treated from January 2000 to June 2004 for full-thickness rectal prolapse with trans-abdominal surgery in Helsinki. METHODS: Sixty-five of 75 patients were treated laparoscopically, with a 6% conversion rate. Ten patients were operated on openly. Half of the patients were scored as American Society for Anesthesiologists III or IV. RESULTS: The operation time was similar in the laparoscopic and the open rectopexy procedures ($p = 0.15$), whereas laparoscopic resection rectopexy was more time-consuming compared to the open procedure ($p = 0.007$). Intraoperative bleeding during laparoscopic surgery was minimal in comparison to open surgery ($p = 0.006$). Patients treated laparoscopically had a shorter median hospital stay than those treated with an open procedure (rectopexy, 3 and 7 days, respectively; resection rectopexy, 4 and 7.5 days, respectively) ($p < 0.00001$). There was no mortality and minor morbidity. During follow-up, there were two prolapse recurrences. All surgical techniques improved fecal continence considerably. Eighty-four percent of rectopexy patients and 92% of resection rectopexy patients considered the surgical outcome to be excellent or good. CONCLUSIONS: Both rectopexy and resection rectopexy cure prolapse with good results and can be performed safely in older and debilitated patients. The laparoscopic approach enables a shortened hospital stay and is well tolerated in elderly patients.

Meta-analysis of flavonoids for the treatment of haemorrhoids.
Alonso-Coello P, Zhou Q, Martinez-Zapata MJ, Mills E, Heels-Ansdell D, Johanson JF, Guyatt G
Br J Surg. 2006 May 31;.
BACKGROUND:: The aim of the study was to evaluate the impact of flavonoids on those symptoms important to patients with symptomatic haemorrhoids. METHODS:: A comprehensive search strategy was used. All published and unpublished randomized controlled trials comparing any type of flavonoid to placebo or no therapy in patients with symptomatic haemorrhoids were included. Two reviewers independently screened studies for inclusion, retrieved all potentially relevant studies and extracted data. RESULTS:: Fourteen eligible trials randomized 1514 patients. Studies were of moderate quality and showed variability in the results with potential publication bias. Meta-analyses using random-effects models suggested that flavonoids decrease the risk of not improving or persisting symptoms by 58 per cent (relative risk (RR) 0.42 (95 per cent confidence interval (c.i.) 0.28 to 0.61)) and showed an apparent reduction in the risk of bleeding (RR 0.33 (95 per cent c.i. 0.19 to 0.57)), persistent pain (RR 0.35 (95 per cent c.i. 0.18 to 0.69)), itching (RR 0.65 (95 per cent c.i. 0.44 to 0.97)) and recurrence (RR 0.53 (95 per cent c.i. 0.41 to 0.69)). CONCLUSION:: Limitations in methodological quality, heterogeneity and potential publication bias raise questions about the apparent beneficial effects of flavonoids in the treatment of haemorrhoids.

A prospective audit of early pain and patient satisfaction following out-patient band ligation of haemorrhoids.
Watson NF, Liptrott S, Maxwell-Armstrong CA
Ann R Coll Surg Engl. 2006 May;88(3):275-9.
INTRODUCTION: Information regarding early morbidity, pain and patient satisfaction following band ligation of haemorrhoids is limited. This is the first report to address these issues specifically.PATIENTS AND METHODS: A total of 183 patients underwent the procedure over a 10-month period. Prospective data were collected using a detailed structured questionnaire regarding symptoms, analgesia requirements and patient

satisfaction in the following week.RESULTS: The response rate was 74% (135/183). Pain scores were highest 4 h following the procedure. At 1 week, 75% of patients were pain-free, with 9 (7%) still experiencing moderate-to-severe pain. About 65% required oral analgesia, most frequently on the day of procedure. Rectal bleeding occurred in 86 patients (65%) on the day after banding, persisting in 32 (24%) at 1 week. Vaso-vagal symptoms occurred in 41 patients (30%) and were commonest at the time of banding. Eighty patients (59%) were satisfied with their experience and would undergo the procedure again. Patients requiring oral analgesia and those experiencing bleeding or vaso-vagal symptoms were significantly less likely to be satisfied with the procedure. Only 57% of the patients surveyed would recommend the procedure to a friend.CONCLUSIONS: Data from this large cohort of patients suggest that discomfort and bleeding may persist for a week or more following banding of haemorrhoids. Patients should be aware of this in order to make an informed decision as to whether to undergo the procedure, and surgeons should investigate ways of reducing it. Patient satisfaction may be further improved by more accurate counselling regarding the incidence of specific complications.

Red Hot Chili Pepper and Hemorrhoids: The Explosion of a Myth: Results of a Prospective, Randomized Placebo-Controlled Crossover Trial.
Altomare DF, Rinaldi M, La Torre F, Scardigno D, Roveran A, Canuti S, Morea G, Spazzafumo L
Dis Colon Rectum. 2006 May 19;.
PURPOSE: Spicy foods are appreciated by a large part of the world population but have been blamed for causing hemorrhoids or exacerbating their symptoms, although no epidemiologic studies have been performed supporting this hypothesis. In this double-blind, randomized, placebo-controlled, crossover trial, we have studied the effects of a single dose of red hot chili pepper on the hemorrhoidal symptoms. METHODS: Fifty patients with second-degree and third-degree symptomatic hemorrhoids were randomly assigned to take a capsule containing red hot chili powder or placebo during lunch, scoring five hemorrhoidal symptoms (bleeding, swelling, pain, itching, and burning) on a visual analog scale. After one week, crossover treatment was administered according to the same methodology. Other treatments and foods potentially related with anorectal symptoms were discontinued during the study periods. RESULTS: Patients assigned low scores to their hemorrhoidal symptoms before the study and the scores remained unchanged during the 48 hours after both placebo and chili pepper treatment, the latter showing no statistically significant effects. CONCLUSIONS: There is no scientific evidence that a spicy meal based on red hot chili pepper may worsen hemorrhoidal symptoms and, therefore, there is no reason to prevent these patients from occasionally enjoying a spicy dish if they so wish.

Longitudinal multiple rubber band ligation: an alternative method to treat mucosal prolapse of the anterior rectal wall.
Kleinubing H Jr, Pinho MS, Ferreira LC
Dis Colon Rectum. 2006 Jun;49(6):876-8.
PURPOSE: The aim of this study is to present a new approach for the treatment of mucosal prolapse of the anterior rectal wall using a multiple longitudinal rubber band ligation procedure. METHODS: The therapeutic approach using multiple longitudinal rubber band ligations on anterior rectal wall was undertaken in 17 patients after failure of conventional medical treatment. RESULTS: Double rubber band ligation was undertaken in seven patients and triple ligation in nine patients. In a median follow up of 12 months fourteen patients (87.5 percent) showed complete and persistent remission of symptoms. Two patients remained symptomatic and were treated by a second session of rubber band ligation which was succesful in one of them. No complications occured in this present series except in one patient with internal rectal prolapse patient who complained of persistent pain for seven days. CONCLUSIONS: These encouraging results have suggested this method as an effective alternative in the relief of this usually very symptomatic disorder.

Adaptation of the pursestring suture anoscope with a small hole in a case of stapled hemorrhoidectomy.
Yamamoto J, Nagai M, Smith TB, Tamaki S, Kubota T, Sasaki K, Ohmori T, Maeda K
Dis Colon Rectum. 2006 Jun;49(6):925-6.
PURPOSE: Stapled hemorrhoidectomy has become more popular with the general surgeon, mainly because of reduced postoperative pain and shorter hospital stays. However, we have faced some complications

caused byirregular pursestring suture of the rectal mucosa. METHODS: To secure pursestring suture in the rectal mucosa layer, we placed a small hole in the Pursestring Suture Anoscope. RESULTS: Since 2001, we have experienced more than 200 cases of stapled hemorrhoidectomy and in the last two years we have performed pursestring suture by using a Pursestring Suture Anoscope with a small hole in 60 cases. Rectal mucosa was resected without irregular defect in all the cases. CONCLUSIONS: Stapled hemorrhoidectomy can be performed easily and safely with this modification.

5 – RETENTIONS 2006 05

Lasers for the Treatment of Bladder Outlet Obstruction: Are They Challenging Conventional Treatment Modalities?
de la Rosette J, Alivizatos G
Eur Urol. 2006 May 2;.

Incidence of primary and recurrent acute urinary retention between 1998 and 2003 in England.
Cathcart P, van der Meulen J, Armitage J, Emberton M
J Urol. 2006 Jul;176(1):200-4.
PURPOSE: We report how the incidence of primary and recurrent acute urinary retention changed in England between 1998 and 2003. In addition, we present data on changes with time in the use of prostatectomy after acute urinary retention and recurrent acute urinary retention. MATERIALS AND METHODS: Data were extracted from the Hospital Episode Statistics database of the Department of Health in England. Patients were included in the study if an International Classification of Diseases, Tenth Revision code for acute urinary retention or an operative procedure code for transurethral prostate resection was present in any diagnosis or procedure fields of the Hospital Episode Statistics database. A total of 165,527 men were identified to have been hospitalized with acute urinary retention in the study period. RESULTS: The incidence of primary acute urinary retention was 3.06/1,000 men yearly. Acute urinary retention was spontaneous in 65.3% of cases. The incidence of acute urinary retention decreased from 3.17/1,000 men yearly in 1998 to 2.96/1,000 yearly in 2003. Surgical treatment following spontaneous acute urinary retention decreased 20% from 32% in 1998 to 26% in 2003. This trend coincided with a 20% increase in the rate of recurrent acute urinary retention. CONCLUSIONS: The slight decrease in the incidence of primary acute urinary retention suggests that the shift away from surgical treatment for benign prostatic hyperplasia has not resulted in an increase in acute urinary retention. The increase in recurrent acute urinary retention suggests that the observed decrease in surgery after acute urinary retention may have put more men at risk for acute urinary retention recurrence.

Noninvasive methods of diagnosing bladder outlet obstruction in men. Part 2: noninvasive urodynamics and combination of measures.
Belal M, Abrams P
J Urol. 2006 Jul;176(1):29-35.
PURPOSE: Many methods have been suggested to diagnose bladder outlet obstruction, as defined by the gold standard of pressure flow studies. Difficulty arises when comparing completely different methods of diagnosing bladder outlet obstruction. A comprehensive review of the literature on the different methods used to diagnose bladder outlet obstruction by noninvasive means was performed with a view to allow such a comparison. MATERIALS AND METHODS: A MEDLINE search was done of the published literature covering until the end of 2004 on noninvasive methods, including single measure and combinations of measures, to diagnose bladder outlet obstruction. A direct comparison of all of the different methods was made using the sensitivity, specificity, likelihood ratio, and pretest and posttest probability of diagnosing bladder outlet obstruction for each test. For many techniques these values were calculated from the data presented in the article. RESULTS: A multitude of methods has been applied to diagnose bladder outlet obstruction. Broadly the methods were divided into nonurodynamic and noninvasive urodynamic methods. Nonurodynamic methods were considered in part 1 of the review. Part 2 considered noninvasive urodynamic techniques, such as uroflowmetry, the penile cuff, the condom method and Doppler urodynamics. A combination of single measures was also considered and the relative merits of these approaches were discussed. CONCLUSIONS: A combination of noninvasive urodynamics and ultrasound derived measures

provide promising methods of diagnosing bladder outlet obstruction. However, pressure flow studies still remain the gold standard for assessing bladder outlet obstruction.

Noninvasive methods of diagnosing bladder outlet obstruction in men. Part 1: nonurodynamic approach.
Belal M, Abrams P
J Urol. 2006 Jul;176(1):22-8.
PURPOSE: Many methods have been suggested for diagnosing bladder outlet obstruction, as defined by the gold standard of pressure flow studies. Difficulty arises when comparing completely different methods of diagnosing bladder outlet obstruction. A comprehensive review of the literature of the different methods used to diagnose bladder outlet obstruction by noninvasive means was performed with a view to allow such a comparison. MATERIALS AND METHODS: A MEDLINE search was done of the published literature covering until the end of 2004 on noninvasive methods used to diagnose bladder outlet obstruction. A direct comparison of all different methods was made using the sensitivity and specificity, positive predictive value and likelihood ratio of each test. For many of the techniques these values were calculated from the data presented in the article. RESULTS: A multitude of methods has been applied to diagnose bladder outlet obstruction. Broadly the methods were divided into nonurodynamic and noninvasive urodynamic methods. Nonurodynamic methods include symptoms, biochemical tests such as prostate specific antigen, ultrasound derived measurements such as post-void residual urine, bladder weight, prostate configuration and size, intravesical prostatic protrusion and the Doppler resistive index. Part 1 of the review explores and discusses the relative merits of the nonurodynamic based methods. CONCLUSIONS: Ultrasound derived measures such as bladder wall thickness and bladder weight offer a promising possibility of diagnosing bladder outlet obstruction noninvasively. However, further reproducibility and large accuracy studies with better methodological standards are required before they can replace pressure flow studies.

Is it Reasonable to Treat Refractory Voiding Dysfunction in Children With Botulinum-A Toxin?
Radojicic ZI, Perovic SV, Milic NM
J Urol. 2006 Jul;176(1):332-336.
PURPOSE: We present our results with botulinum-A toxin transperineal pelvic floor/external sphincter injection combined with behavioral and biofeedback reeducation in children with voiding dysfunction who had been resistant to previously applied therapies. MATERIAL AND METHODS: Eight boys and 12 girls between 7 and 12 years old (mean age 9) with recurrent urinary tract infection, an interrupted or fractional voiding pattern and high post-void residual urine in whom behavioral, short biofeedback and alpha-blocker therapies had failed were included in the study. They were treated with botulinum-A toxin at a dose of 50 to 100 U. Botulinum-A toxin was injected transperineally into the pelvic floor and/or external sphincter in all patients. In boys the sphincter was localized endoscopically before injection (endoscopically assisted transperineal approach). Behavioral and biofeedback reeducation started 15 days after injection. RESULTS: Followup was between 9 and 14 months. All patients were without urinary tract infection and fever, while 5 were still on chemoprophylaxis. Six months after treatment residual urine decreased in 17 of 20 patients by 0 to 130 ml (mean +/- SD 45.75 +/- 32.17 ml, $t = 6.360$, $p < 0.001$). Nine patients reestablished a normal voiding curve and 8 showed improvement. Three did not manifest any significant improvement. In 1 girl transitory incontinence resolved spontaneously within 48 hours. There were no other complications. CONCLUSIONS: The effect of botulinum is transitory. However, it can break the circle of detrusor-sphincter dyssynergia and the period when it is sustained can be used for retraining the patient in normal voiding. At this moment botulinum-A toxin is one of last options in refractory cases of voiding dysfunction.

Rectal hyposensitivity.
Gladman MA, Lunniss PJ, Scott SM, Swash M
Am J Gastroenterol. 2006 May;101(5):1140-51.
Rectal hyposensitivity (RH) relates to a diminished perception of rectal distension that is diagnosed during anorectal physiologic investigation. There have been few direct studies of this physiologic abnormality, and its contribution to the development of functional bowel disorders has been relatively neglected. However, it appears to be common in patients with such disorders, being most prevalent in patients with functional constipation with or without fecal incontinence. Indeed, it may be important in the etiology of symptoms in

certain patients, given that it is the only "apparent" identifiable abnormality on physiologic testing. Currently, it is usually diagnosed on the basis of elevated sensory threshold volumes during balloon distension in clinical practice, although such a diagnosis may be susceptible to misinterpretation in the presence of altered rectal wall properties, and thus it is uncertain whether a diagnosis of RH reflects true impairment of afferent nerve function. Furthermore, the etiology of RH is unclear, although there is limited evidence to support the role of pelvic nerve injury and abnormal toilet behavior. The optimum treatment of patients with RH is yet to be established. The majority are managed symptomatically, although "sensory-retraining biofeedback" appears to be the most effective treatment, at least in the short term, and is associated with objective improvement in the rectal sensory function. Currently, fundamental questions relating to the contribution of this physiologic abnormality to the development of functional bowel disorders remain unanswered. Acknowledgment of the potential importance of RH is thus required by clinicians and researchers to determine its relevance.

Alosetron: ischemic colitis and serious complications of constipation.
Gallo-Torres H, Brinker A, Avigan M
Am J Gastroenterol. 2006 May;101(5):1080-3.
Drugs such as alosetron that modulate serotonin effects by stimulating or blocking its receptors may play an important role in the treatment of some patients with irritable bowel system. In the case of alosetron, a 5HT-3 antagonist, an analysis of data from randomized clinical trials and postmarketing experiences have demonstrated a causal relationship between this drug and ischemic colitis and serious complications of constipation. Because the mechanism(s) of drug-induced ischemic colitis and possibly other forms of intestinal ischemia associated with alosetron have not been elucidated, there is need to further assess risk with regard to patient susceptibility and other factors.

Measuring successful treatment of irritable bowel syndrome: is "satisfactory relief " enough?
Schoenfeld P, Talley NJ
Am J Gastroenterol. 2006 May;101(5):1066-8.
The treatment options for the irritable bowel syndrome (IBS) are expanding as new therapies, including probiotics and serotonin receptor agents, become available. Before any new agents gain widespread use, they must be studied in appropriately designed clinical trials. Symptom improvement remains the key clinically but the best technique to measure symptom improvement is unclear. Many IBS therapy studies have used a binary endpoint such as "Have you had satisfactory relief of your IBS symptoms in the past week? Yes/No?" The study by Whitehead and colleagues in this issue suggests that "satisfactory relief" is affected by baseline symptom severity and may not always truly reflect the symptom burden. Future research needs to determine whether "satisfactory relief" is truly adequate, or whether alternatives such as the proportion of patients achieving a > or = 50% reduction in symptom severity would represent a superior approach to capture clinically important improvement.

Short-term effects of magnetic sacral dermatome stimulation for idiopathic slow transit constipation: sham-controlled, cross-over pilot study.
Lee KJ, Kim JH, Cho SW
J Gastroenterol Hepatol. 2006 Jan;21(1 Pt 1):47-53.
BACKGROUND AND AIM: An increase in recto-sigmoid colon activity through electrical stimulation of the sacral dermatomes has previously been reported. It has not been evaluated whether or not sacral dermatome stimulation has beneficial effects on constipation symptoms and anorectal function in constipated patients. Our aim was to evaluate short-term effects of magnetic stimulation of the sacral dermatomes on constipation symptoms and anorectal function in patients with idiopathic slow transit constipation. METHOD: Fourteen patients with idiopathic slow transit constipation were enrolled. Constipation symptoms, stool form and anorectal function were assessed before treatment, and at 3 and 6 weeks of treatment. Six-week treatment consisted of either a 3-week period of sham treatment or a 3-week period of magnetic stimulation of the S2-S3 dermatomes, which was performed in a randomized cross-over design. RESULTS: During the stimulation period, the frequency score of spontaneous bowel movements decreased in eight of the 14 patients (2.9 [2-3]vs 1.4 [0-2]), whose threshold volumes for urge to defecate and maximum tolerable volumes were significantly greater than those of the non-responders, and significantly decreased at the end of treatment. The degree of straining on defecation also significantly decreased in the responders.

Responders had shorter right colonic transit time and longer left colonic transit time compared to the non-responders. Sham treatment did not affect constipation symptoms, stool form and rectal sensation. CONCLUSION: Sacral dermatome stimulation may offer potential for therapeutic benefit for a subset of patients with idiopathic slow transit constipation, particularly constipated patients with rectal hyposensation or hindgut dysfunction.

6 – INCONTINENCES 2006

Intravaginal electrical stimulation: a randomized, double-blind study on the treatment of mixed urinary incontinence.

Amaro JL, Gameiro MO, Kawano PR, Padovani CR

Acta Obstet Gynecol Scand. 2006;85(5):619-22.

BACKGROUND: The aim of this study was to compare effective and sham intravaginal electrical stimulation (IES) in treating mixed urinary incontinence. METHODS: Between January 2001 and February 2002, 40 women were randomly distributed, in a double-blind study, into two groups: group G1 (n=20), effective IES, and group G2 (n = 20), sham IES, with follow up at one month. Different parameters was studied: 1. clinical questionnaire; 2. body mass index; 3. 60-min pad test; 4. urodynamic study. The protocol of IES consisted of three 20-min sessions per week over a seven-week period. The Dualpex Uro 996 used a frequency of 4 Hz. RESULTS: There was no statistically significant difference in the demographic data of both groups. The number of micturitions per 24 h after treatment was reduced significantly in both groups. Urge incontinence was reduced to 15% in G1 and 31.5% in G2; there was no significant difference between the groups. In the analog wetness and discomfort sensation evaluations were reduced significantly in both groups. The pretreatment urodynamic study showed no statistical difference in urodynamic parameters between the groups. Ten percent of the women presented involuntary detrusor contractions. In the 60-min pad test, there was a significant reduction in both groups. In regards to satisfaction level, after treatment, 80% of G1 patients and 65% of G2 patients were satisfied. There was no statistically significant difference between the groups. CONCLUSION: Significant improvement was provided by effective and sham electrostimulation, questioning the effectiveness of electrostimulation as a monotherapy.

Hysterectomy and incontinence: a study from the Swedish national register for gynecological surgery.

Engh MA, Otterlind L, Stjerndahl JH, Lofgren M

Acta Obstet Gynecol Scand. 2006;85(5):614-8.

BACKGROUND: Hysterectomy is one factor that has been suggested to be a risk factor for developing stress incontinence. In Sweden, with a population of 8.86 million, a national register was set up in 1997 in order to have data for assessing the quality of gynecological surgery for benign disorders. METHODS: Data in the Swedish national register for gynecological surgery during the period 1997-2002 were investigated. Surgical methods compared during this time period were: total hysterectomy (abdominal/laparoscopic, n=198/116), subtotal hysterectomy (abdominal/laparoscopic, n=163/86), and total hysterectomy (vaginal/laparoscopic assisted vaginal, n=265/7). Patients who underwent endometrial destruction (endometrial ablation, endometrial balloon treatment, n=187) were used as a control group. Only patients with no preoperative complaints were included. Outcome measures were answers to subjective questions asked pre- and postoperatively regarding urinary problems and incontinence. RESULTS: De novo symptoms of stress incontinence, urgency and urgency incontinence, and/or mixed incontinence were noted in all groups. No differences were found among the groups. CONCLUSION: Factors other than hysterectomy should be discussed causing stress incontinence in women.

Quality of life in relation to TVT procedure for the treatment of stress urinary incontinence.

Bakas P, Liapis A, Giner M, Creatsas G

Acta Obstet Gynecol Scand. 2006;85(6):748-52.

Background. The aim of the study was to assess the impact of tension-free vaginal tape (TVT) procedure as anti-incontinence surgery on patients' urinary symptoms and quality of life. Methods. Ninety-eight patients participated in the study. All patients were operated for urodynamic stress incontinence with the TVT procedure. Patients with prolapse more than first degree according to International Continence Society

classification, previous anti-incontinence surgery, detrusor overactivity, or intrinsic sphincter deficiency were excluded from the study. Patients' quality of life assessment was performed with the use of the short form of Incontinence Impact Questionnaire and short form of Urinary Distress Inventory (UDI-6). Results. Mean follow-up time was 12.4 +/-4.2 months (range: 6-18 months). The cure rate for TVT procedure was 87.6%. There was a statistically significant improvement of quality of life postoperatively. In addition, the domains of UDI-6 concerning irritative symptoms and stress urinary incontinence symptoms showed statistically significant improvement postoperatively, while the domain concerning obstructive symptoms did not show statistically significant difference. Conclusions. Tension-free vaginal tape procedure as anti-incontinence surgery significantly improves the quality of life in female patients with urodynamic stress incontinence.

A New Artificial Urinary Sphincter with Conditional Occlusion for Stress Urinary Incontinence: Preliminary Clinical Results.
Knight SL, Susser J, Greenwell T, Mundy AR, Craggs MD
Eur Urol. 2006 May 2;.
OBJECTIVES: To perform a preliminary clinical investigation to determine the safety and efficacy of a novel artificial urinary sphincter (AUS) with conditional occlusion for the treatment of stress urinary incontinence. METHODS: Male patients with urodynamically proven stress urinary incontinence after a prostatectomy were implanted with the novel AUS. They were followed up over a period of 12 months and the device tested for efficacy by using objective measurements of urinary leakage and continence. We derived a new measure for continence called the Continence Index. RESULTS: We have demonstrated that the patients receiving the new AUS showed a reduction of greater than 10-fold in mean daily leakage volume from 770.6ml to 55.1ml. There was an overall improvement in the Continence Index from 54% to 97%. CONCLUSIONS: The new AUS with conditional occlusion provides good continence rates and enables adjustment of regulating pressure in situ.

Management of urinary incontinence in Medicare managed care beneficiaries: results from the 2004 Medicare Health Outcomes Survey.
Mardon RE, Halim S, Pawlson LG, Haffer SC
Arch Intern Med. 2006 May 22;166(10):1128-33.
BACKGROUND: Despite the high prevalence of urinary incontinence (UI) among older persons and the existence of effective treatments, UI remains underreported by patients and underdiagnosed by clinicians. We measured the occurrence of UI problems in Medicare managed care beneficiaries, frequency of physician-patient communication regarding UI, and frequency of UI treatment. METHODS: We used cross-sectional data from the 2004 Medicare Health Outcomes Survey, which measured self-reported UI (accidental leakage of urine) and UI problems in the past 6 months, 36-Item Short-Form Health Survey health measures, discussions of UI with a health care provider, and receipt of UI treatment. RESULTS: The overall incidence of UI within the past 6 months was 37.3%, consistent with previous estimates. Problems with UI were strongly associated with poorer self-reported health. Mean 36-Item Short-Form Health Survey physical and mental health scores were lower by more than 5 points (on a 100-point scale, P<.001) for respondents with major UI problems when controlling for age, sex, race, Hispanic ethnicity, and major comorbidities. These differences were among the largest of any condition measured. Only 55.5% of those with self-reported UI problems reported discussing these problems during their recent visit to a physician or other health care provider. The rate of patient-reported UI treatment was 56.5% and was lower (P<.001) for older individuals (eg, 46.3% for those aged 90-94 years) or those with poor self-reported health status (50.5%). CONCLUSIONS: Among older persons, UI is common, underdiagnosed, and associated with substantial functional impairment. There appears to be considerable opportunity to mitigate the effects of UI on health and quality of life among community-dwelling older persons.

[Cellular therapy of the urethral sphincter insufficiency]
Yiou R
Prog Urol. 2005 Dec;15(6 Suppl 1):1293.

Visibility of the polypropylene tape after tension-free vaginal tape (TVT) procedure in women with stress urinary incontinence: comparison of introital ultrasound and magnetic resonance imaging in

vitro and in vivo.
Schuettoff S, Beyersdorff D, Gauruder-Burmester A, Tunn R
Ultrasound Obstet Gynecol. 2006 Jun;27(6):687-92.
OBJECTIVE: To determine whether introital sonography and magnetic resonance imaging (MRI) after TVT (tension-free vaginal tape) insertion can depict the polypropylene tape, and thus be used for patient follow-up. METHODS: The study comprised an experimental part, which investigated in-vitro visualization of the polypropylene tape in a model (phantom), and a clinical part, in which 20 women (mean age, 53.4 years) with clinically and urodynamically proven stress urinary incontinence without prolapse were investigated by introital ultrasound and MRI before and 13 months after the TVT procedure. RESULTS: In the phantom, the polypropylene tape was depicted with a low signal intensity by MRI and as a highly echogenic structure by ultrasound. In the clinical study, introital ultrasound in a mediosagittal orientation depicted the vaginal tape in all patients: it was located under either the midurethra (n = 16) or the lower urethra (n = 4), and in either the muscular coat of the urethra (n = 8) or in the urethrovaginal space (n = 12), the tape was either flat (n = 6) or curled up (n = 14), and there was no retropubic visualization of the tape. Overall, depiction by MRI was limited, and was poorer in comparison with ultrasound, especially when the tape had a sub- or paraurethral location. Retropubically, however, MRI identified the tape near the periosteum of the pubic bone (55% of cases), in the retropubic space (37.5% of cases), or near the bladder wall (7.5% of cases). CONCLUSION: Sonography is recommended for evaluation of the suburethral and paraurethral tape portions, while MRI is suitable for retropubic evaluation after the TVT procedure. Copyright (c) 2006 ISUOG. Published by John Wiley & Sons, Ltd.

[REMEEX: A possible treatment option in selected cases of sphincter incompetence]
Campos-fernandes JL, Timsit MO, Paparel P, Devonec M, Leriche B, Leriche A, Ruffion A
Prog Urol. 2006 Apr;16(2):184-91.
OBJECTIVE: To evaluate the functional results and morbidity of adjustable tension suburethral tape (REMEEX) in the treatment of urinary incontinence due to severe sphincter incompetence (MUCP < 40 cm H2O) in patients presenting a contraindication to artificial sphincter operated between December 2001 and May 2004. Twelve patients (66.7%) had already undergone incontinence surgery. Ten patients (55.5%) had mixed urinary incontinence. The efficacy of the tape was considered to be good when incontinence resolved completely, partial when incontinence was decreased by > 50% and/or PVR > 100 ml. All other cases were considered to be failures. In April 2005, after a mean follow-up of 26.3 months, retrospective evaluation of the functional results was performed by means of a pad-test and a questionnaire comprising an MHU (urinary disability) score and a Ditrovie score. Complications after each intercurrent event were recorded. RESULTS: The initial efficacy of the tape was considered to be good in 13 patients (72.2%) and partial in 4 patients (22.2%) with only one initial failure. Eight patients (44.4%) required secondary adjustment after a mean interval of 5.2 months, with a failure rate of 62.5%. In April 2005, 10 patients (55.5%) had a good result, 2 patients (11.1%) required self-catheterization (partial efficacy) and 6 patients (33.4%) were considered to be failures. In terms of morbidity, we observed 2 bladder injuries (11.1%), 6 superinfections of the device (33.3%), 2 (11.1%) of which required removal of the material. Fifteen patients (83.3%) answered the questionnaire: 6 patients (40%) had an MHU score greater than 3. The mean Ditrovie score was 2.1. 9 patients (60%) had a score less than 2 and 4 patients (26.6%) had a score greater than 3. CONCLUSION: The results of this series, in patients in whom artificial sphincter was contraindicated, are satisfactory at the price of acceptable morbidity. Before defining the place of this device in the range of treatment options for sphincter incompetence, our results must be confirmed by a longer series.

Botulinum-A toxin injections into the detrusor muscle decrease nerve growth factor bladder tissue levels in patients with neurogenic detrusor overactivity.
Giannantoni A, Di Stasi SM, Nardicchi V, Zucchi A, Macchioni L, Bini V, Goracci G, Porena M
J Urol. 2006 Jun;175(6):2341-4.
PURPOSE: We investigated the effects of BTX-A on visceral afferent nerve transmission by measuring bladder tissue NGF levels in patients with neurogenic detrusor overactivity before and after intravesical treatment with BTX-A. We also compared the bladder tissue NGF content with clinical and urodynamic data. MATERIALS AND METHODS: A total of 23 patients underwent clinical evaluation and urodynamics with detection of the UDC threshold, maximum pressure and maximum cystometric capacity before, and at the 1

and 3-month followups. Endoscopic bladder wall biopsies were also obtained at the same time points. NGF levels were measured in tissue homogenate by enzyme-linked immunosorbent assay (Promega, Madison, Wisconsin). RESULTS: At 1 and 3 months mean catheterization and incontinent episodes were significantly decreased ($p < 0.05$ and < 0.001, respectively). On urodynamics we detected a significant increase in the UDC threshold and maximum cystometric capacity, and a significant decrease in UDC maximum pressure at the 1 and 3-month follow-ups compared to baseline (each $p < 0.001$). At the same time points we detected a significant decrease in NGF bladder tissue content (each $p < 0.02$). CONCLUSIONS: BTX-A intravesical treatment induces a state of NGF deprivation in bladder tissue that persists at least up to 3 months. As caused by BTX-A, the decrease in acetylcholine release at the presynaptic level may induce a decrease in detrusor contractility and in NGF production by the detrusor muscle. Alternatively BTX-A can decrease the bladder level of neurotransmitters that normally modulate NGF production and release.

Outcomes following erosions of the artificial urinary sphincter.
Raj GV, Peterson AC, Webster GD
J Urol. 2006 Jun;175(6):2186-90; discussion 2190.
PURPOSE: Artificial urinary sphincter urethral cuff erosion occurs in up to 5.0% of cases, presenting a complex management problem. We examine our experience with the eroded AUS, relating to preoperative risk factors, operative management and outcomes. MATERIALS AND METHODS: We reviewed the medical records of 637 patients undergoing bulbar urethral AUS implantation from 1990 to 2003 for demographic and surgical variables. RESULTS: Of the 637 records reviewed, 46 patients underwent 54 explantations of the AUS device for erosions, including 13 who had the primary implant performed at our institution and 33 being referred for management of erosion after implantation elsewhere. Our institution erosion rate was 2.2%. Mean followup after AUS reimplant following erosion was 27.8 months (range 1 to 180). Comorbidities were more prevalent in patients with erosions included hypertension ($p = 0.006$), coronary artery disease ($p = 0.03$), prior radiation therapy ($p = 0.006$) and prior AUS revisions ($p = 0.0001$). A majority of patients had persistent mild incontinence (0 to 1 pad daily in 29 or 56.8%), moderate (1 to 3 pads daily in 9 or 17.4%) and severe (more than 3 pads daily in 6 or 11.8%) incontinence after secondary AUS implantation. Patients who underwent reimplantation after AUS cuff erosions have a significantly higher rate of second erosions (in 16, 34.8%) within an average of 6.7 months (range 3 to 24), including our own 11.8% institutional rate (in 4). CONCLUSIONS: Our study suggests that patients with comorbidities including hypertension, coronary artery disease, prior radiation therapy and prior AUS revisions are more likely to have erosions of their AUS. Nevertheless, continence can still be salvaged using various strategies which optimize use of the remaining healthy urethral tissue.

Failure of sacral nerve stimulation due to migration of tined lead.
Deng DY, Gulati M, Rutman M, Raz S, Rodriguez LV
J Urol. 2006 Jun;175(6):2182-5.
PURPOSE: Stimulation of the sacral nerves is a commonly used treatment for frequency, urgency, urge incontinence, retention and other types of voiding dysfunction. Minimally invasive placement of a percutaneous permanent quadripolar tined lead into the sacral foramen has been described. No lead migration has been reported. We report on our experience with lead migration and the subsequent failure of InterStim in a large cohort of patients with a focus on possible diagnostic and salvage techniques. MATERIALS AND METHODS: Between February 2002 and April 2005 tined lead electrodes were implanted in the S3 foramen in 235 patients using the InterStim system. Patients with a good response during the testing phase (greater than 50% improvement) underwent placement of an implantable pulse generator. Position was confirmed by radiographic evaluation intraoperatively. Sacral radiographs were obtained at the first postoperative visit, after IPG placement and whenever there was a change in symptomatic response. RESULTS: There were 5 patients (2.1%) in whom treatment failed after a successful trial of stimulation due to lead migration. This was seen as early as 3 weeks and as late as 8 months. Migration of the lead occurred between first and second stage implantation in 1 of the 5 cases, and occurred after the second stage in 4 of 5. Anterior migration was noted in 4 patients and posterior migration was noted in 1. CONCLUSIONS: Lead migration after placement of the tined lead can occur and thus sacral radiographs should be routinely used. This complication can be easily resolved without significant morbidity to the patient.

Predictors of success for first stage neuromodulation: motor versus sensory response.
Cohen BL, Tunuguntla HS, Gousse A
J Urol. 2006 Jun;175(6):2178-80; discussion 2180-1.
PURPOSE: We investigated whether intraoperative motor or sensory response is more predictive of successful sacral neuromodulation using the InterStim system. MATERIALS AND METHODS: A total of 35 patients with medically refractory frequency, urgency and urge incontinence were enrolled in the study. All patients underwent lead placement for quadripolar test stimulation under local anesthesia with intravenous sedation. Confirmation of correct lead placement was by observation of known motor and sensory responses that result from third sacral nerve stimulation. Motor and sensory responses were documented intraoperatively. Patients had a 1-week trial of stimulation, and those who had greater than 50% improvement in symptoms had placement of the implantable pulse generator. Those without at least 50% improvement in their symptoms had the quadripolar lead removed. RESULTS: Of the 35 patients enrolled 21 had successful quadripolar test stimulation and went on to permanent implantable pulse generator placement. Of the patients who had successful quadripolar test stimulation 95% demonstrated positive intraoperative motor response whereas only 21.4% of patients with unsuccessful quadripolar test stimulation demonstrated positive motor response. If only a positive sensory response was elicited, patients had only a 4.7% chance of having a positive quadripolar test stimulation. CONCLUSIONS: A positive quadripolar test stimulation (greater than 50% improvement in symptoms) with InterStim sacral neuromodulation is more likely when intraoperative lead placement results in positive motor response vs only sensory response.

Prediction of medicare drug formulary drugs for treatment of overactive bladder.
Grocela JA, Kanji A, Ternullo J
J Urol. 2006 Jul;176(1):252-6.
PURPOSE: With the establishment and signing into law the Medicare and Prescription Drug Improvement and Modernization Act of 2003, also known as Medicare Part D, medical costs are expected to soar. In fact, the program is expected to cost more than a trillion dollars through 2015. Establishment of the Medicare Part D drug formulary will allow cost containment but still absorb patient and physician preferences as well as a consideration of efficacy and safety data. MATERIALS AND METHODS: Potential Medicare formulary choices were examined in the anticholinergic class, as commonly used by urologists, and small in number of available drugs. Formulary selection parties and issues were individually analyzed, including the government in respect to cost containment, patients in relation to efficacy and cost, physicians in relation to preferences and influence and drug companies in relation to lobbying power, country of base of operations and market shares. Costs to Medicare and patients were calculated using discount Internet sites for pricing and simulated using Medicare Part D benefits. RESULTS: Generic oxybutynin is likely to be included because it is the least expensive to patients and Medicare, but it has the lowest efficacy. Detrol(R) LA is likely to be the long acting choice due to efficacy, cost and manufacture by a United States based company. CONCLUSIONS: A simulation of cost analysis of anticholinergics for treatment of overactive bladder would help urologists better understand the Medicare formulary selection process.

Increasing costs of urinary incontinence among female medicare beneficiaries.
Anger JT, Saigal CS, Madison R, Joyce G, Litwin MS
J Urol. 2006 Jul;176(1):247-51.
PURPOSE: We measured the financial burden of urinary incontinence in the United States from 1992 to 1998 among women 65 years old or older. MATERIALS AND METHODS: We analyzed Medicare claims for 1992, 1995 and 1998 and estimated spending on the treatment of urinary incontinence. Total costs were stratified by type of service (inpatient, outpatient and emergency department). RESULTS: Costs of urinary incontinence among older women nearly doubled between 1992 and 1998 in nominal dollars, from $128 million to $234 million, primarily due to increases in physician office visits and ambulatory surgery. The cost of inpatient services increased only slightly during the period. The increase in total spending was due almost exclusively to the increase in the number of women treated for incontinence. After adjusting for inflation, per capita treatment costs decreased about 15% during the study. CONCLUSIONS: This shift from inpatient to outpatient care likely reflects the general shift of surgical procedures to the outpatient setting, as well as the advent of new minimally invasive incontinence procedures. In addition, increased awareness of incontinence and the marketing of new drugs for its treatment, specifically anticholinergic medication for overactive

bladder symptoms, may have increased the number of office visits. While claims based Medicare expenditures are substantial, they do not include the costs of pads or medications and, therefore, underestimate the true financial burden of incontinence on the aging community.

The daytime alarm: a useful device for the treatment of children with daytime incontinence.
Van Laecke E, Wille S, Vande Walle J, Raes A, Renson C, Peeren F, Hoebeke P
J Urol. 2006 Jul;176(1):325-7.
PURPOSE: We present the results of the use of a daytime wetting alarm as treatment for therapy resistant daytime wetting in children with an overactive detrusor. MATERIAL AND METHODS: In a retrospective study we reviewed the files of 63 children treated with a daytime alarm because of persistent daytime wetting. Results were considered a complete success when the children were completely dry after treatment, a partial success when there was greater than 50% improvement in daytime wetting and a failure when no change was observed in daytime symptoms. RESULTS: During a study period of 25 months 63 children were treated with a daytime alarm at the department of pediatric urology. The mean treatment period was 14 days. At a followup of 12 months treatment failed in 20 children (32%), 21 (33%) had partial success and 22 (35%) were successfully treated. CONCLUSIONS: In children with therapy resistant daytime wetting and an overactive detrusor the daytime alarm may be a useful treatment tool. Complete cure of daytime incontinence can be attained in 35% of patients, almost a third have improvement in their complaints and training fails in a third.

Prospective study evaluating efficacy and safety of Adjustable Continence Therapy (ProACT) for post radical prostatectomy urinary incontinence.
Trigo-Rocha F, Gomes CM, Pompeo AC, Lucon AM, Arap S
Urology. 2006 May;67(5):965-9.
OBJECTIVES: To examine a new prosthesis, the Adjustable Continence Therapy (ProACT), to determine its ability to treat effectively post radical prostatectomy urinary incontinence. Urinary incontinence is one of the most significant complications of radical prostatectomy. Although the artificial urinary sphincter (AUS) is considered the standard treatment for this condition, many men seek a simpler and less expensive treatment option. METHODS: From November 2000 to March 2004, 25 patients with severe post radical prostatectomy urinary incontinence were treated using the ProACT device. The preoperative evaluation included pad count, Valsalva leak point pressure determination, and Incontinence Quality-of-Life scores. In the follow-up, the same parameters, as well as complications, were analyzed and compared with the baseline measurements to assess the efficacy. RESULTS: The follow-up period was 6 to 48 months (mean 22.4). Of the 25 patients, 23 had follow-up data available for analysis. The improvements in pad count, Incontinence Quality-of-Life score, and Valsalva leak point pressures from baseline to the last follow-up examination were all significant ($P < 0.05$). Overall, of the 23 patients followed up, 15 (65.2%) were continent using 0 to 1 pad daily and satisfied, 3 (13%) were improved but unsatisfied, and 5 (22%) did not have any improvement. Balloon adjustments were performed in all patents to achieve continence. Revision surgery was required in 4 (17%) of 23 patients. CONCLUSIONS: The use of ProACT represents a safe and effective treatment for post radical prostatectomy incontinence with a good degree of patient satisfaction and a low complication rate. Postoperative adjustments were necessary in most patients and were undertaken as a simple outpatient visit.

Minimal clinically important differences in incontinence quality-of-life scores in stress urinary incontinence.
Yalcin I, Patrick DL, Summers K, Kinchen K, Bump RC
Urology. 2006 May 31;.
OBJECTIVES: To determine the clinically relevant reference points for the Incontinence Quality of Life (I-QOL) questionnaire scores in women with stress urinary incontinence and compare them with the treatment effects observed with duloxetine and placebo. METHODS: Using data from 1133 women with predominant stress urinary incontinence in two randomized, placebo-controlled duloxetine studies, the within-treatment and between-treatment minimal clinically important differences (MCIDs) were obtained by anchoring the I-QOL scores to the validated Patient Global Impression of Improvement scale (PGI-I). The within-treatment MCID (mean I-QOL for women rating their condition "a little better" with treatment) and between-treatment

MCID (difference in scores between the group ratings of "no change" and "a little better") were derived. The treatment effects were compared with these MCIDs. Real-time urinary diaries were completed, along with the I-QOL and PGI-I. RESULTS: The within-treatment and between-treatment MCID for the I-QOL total score was 6.3 and 2.5, respectively. The total and subscale scores had almost identical MCIDs. Duloxetine 80 mg significantly improved the I-QOL total and subscale scores. Treatment differences in the I-QOL scores exceeded the between-treatment MCID and the duloxetine I-QOL treatment effect exceeded the within-treatment MCID. The number of patients needed to treat to gain an additional I-QOL responder was 6.8. CONCLUSIONS: Improvements in I-QOL scores should be greater than the within-treatment MCID, and differences between two treatments should be greater than the between-treatment MCIDs, for statistically significant differences to be considered clinically meaningful. We propose 2.5 points as a reasonable guide for the I-QOL between-treatment MCID and 6.3 points for the within-treatment MCID.

Sacral spinal nerve stimulation for fecal incontinence: A viable therapeutic option for refractory incontinence.
Janec EM, Jonnalagadda S
Gastroenterology. 2005 Jul;129(1):388-9; discussion 389-90

Investigation and treatment of faecal incontinence.
Maslekar S, Gardiner A, Maklin C, Duthie GS
Postgrad Med J. 2006 Jun;82(968):363-71.
Faecal incontinence is a debilitating condition affecting people of all ages, and significantly impairs quality of life. Proper clinical assessment followed by conservative medical therapy leads to improvement in more than 50% of cases, including patients with severe symptoms. Patients with advanced incontinence or those resistant to initial treatment should be evaluated by anorectal physiology testing to establish the severity and type of incontinence. Several treatment options with promising results exist. Patients with gross sphincter defects should undergo surgical repair. Those who fail to respond to sphincteroplasty and those with no anatomical defects have the option of either sacral nerve stimulation or other advanced procedures. Stoma formation should be reserved for patients who do not respond to any of the above procedures.

Recent impact of anal sphincter injury on overall Caesarean section incidence.
Mahony R, O'herlihy C
Aust N Z J Obstet Gynaecol. 2006 Jun;46(3):202-4.
Abstract Introduction: Because of increasing recognition of obstetric anal sphincter injury and faecal incontinence, we examined the recent impact of these indications on our institutional Caesarean section incidence. Methods: Retrospective review of the indications for multiparous Caesarean section was performed at the National Maternity Hospital for the 4 years 2000-2003, inclusive, to identify women in whom previous anal sphincter injury was an indication. Individual charts were reviewed and data regarding the nature and extent of previous anal sphincter injury were obtained. Results: Among 17 586 consecutive multiparous deliveries, previous anal sphincter trauma constituted the indication for Caesarean delivery in 67 women, representing 0.4% of all multiparae, 2.9% of multiparous Caesarean sections and 1.3% of all Caesarean sections performed. Fifty (85%) of the 67 women who opted for prelabour Caesarean delivery following previous obstetric anal sphincter injury had symptoms of faecal incontinence (mean continence score 5, range 1-17). Conclusion: Notwithstanding recent increased awareness and documentation, anal sphincter problems represent a small influence on total Caesarean incidence.

Is an anal plug useful in the treatment of fecal incontinence in children with spina bifida or anal atresia?
Van Winckel M, Van Biervliet S, Van Laecke E, Hoebeke P
J Urol. 2006 Jul;176(1):342-4.
PURPOSE: We evaluated the efficacy and tolerance of the Conveen(R) anal plug in children with spina bifida or anal atresia with persistent fecal incontinence necessitating diapers despite bowel management. MATERIALS AND METHODS: Seven 4 to 12-year-old patients with high congenital imperforate anus and 9 who were 6 to 13 years old with spina bifida, no mental retardation and no involuntary urine loss on clean intermittent catheterization were included in the study. During a prospective, 6-week crossover descriptive

study after a test period to find the most comfortable plug with a diameter of 37 or 45 mm patients and parents completed a diary with the number of soiling episodes, stool frequency, stool consistency and the number of diapers used during 3 weeks without and with the plug, respectively. They provided a final assessment of the device. RESULTS: Two of the 7 patients with congenital imperforate anus discontinued use because of pain and discomfort, 1 had a decrease in soiling episodes and 4 achieved full continence and needed no diapers while using 2 plugs daily (range 1 to 4). All patients preferred the smaller plug. Two of the 9 patients with spina bifida always lost the plug within 1 hour after introduction, 5 had a decrease in soiling episodes but continued to need diapers and 2 achieved full continence using 2 plugs daily (range 1 to 4). All patients preferred the larger plug. CONCLUSIONS: The Conveen(R) anal plug is an adjuvant treatment option for fecal incontinence in children with congenital imperforate anus or spina bifida, enabling a minority to stop using diapers. The Conveen(R) anal plug is not a universal solution for fecal incontinence problems in these patients.

Risk Factors for Anal Sphincter Tear in Multiparas.
Dipiazza D, Richter HE, Chapman V, Cliver SP, Neely C, Chen CC, Burgio KL
Obstet Gynecol. 2006 Jun;107(6):1233-1237.
OBJECTIVE: To assess maternal, newborn, and obstetric risk factors associated with anal sphincter tear in multiparous women. METHODS: This case-control study identified 18,779 multiparous vaginal deliveries from 1992 to 2004 from an obstetric automated record database at the University of Alabama at Birmingham. Two hundred eighty-four patients were selected, 145 cases and 139 controls. Variables from the index pregnancy and prior pregnancies were analyzed, and multivariable logistic regression models were constructed to determine significant predictor variables for anal sphincter tear in multiparous women. RESULTS: One hundred forty-five multiparous women with no history of cesarean delivery sustained a sphincter tear. Multivariable logistic regression showed a significant association with episiotomy (odds ratio [OR] 16.3, 95% confidence interval [CI] 7.7-34.4), shoulder dystocia (OR 7.9, CI 1.6-38), forceps delivery (OR 4.7, CI 2.0-11.2), and being married (OR 2.2, CI 1.1-4.6). A second exploratory model that included variables from previous pregnancies, showed that in addition to episiotomy (OR 34.6, CI 8.8-136), shoulder dystocia (OR 11.1, CI 1.3-95.2), forceps delivery (OR 6.1, CI 1.6-23.5), previous sphincter tear (OR 7.7, CI 1.2-48.7), and second stage of labor greater than 1 hour (OR 6.7, CI 1.1-42.5) were associated with tear. CONCLUSION: The strongest clinical risk factors for anal sphincter tear in multiparous women are episiotomy, shoulder dystocia, previous sphincter tear, prolonged second stage of labor, and forceps delivery. LEVEL OF EVIDENCE: II-2.

Repair Techniques for Obstetric Anal Sphincter Injuries: A Randomized Controlled Trial.
Fernando RJ, Sultan AH, Kettle C, Radley S, Jones P, O'brien PM
Obstet Gynecol. 2006 Jun;107(6):1261-1268.
OBJECTIVE: To compare one-year outcomes of primary overlap versus end-to-end repair of the external anal sphincter after acute obstetric anal sphincter injury. METHODS: Women who sustained third-degree (3b = greater than 50% external anal sphincter thickness, 3c = internal sphincter injury) or fourth-degree (including anorectal epithelium) perineal tears were randomly allocated to either immediate primary overlap or end-to-end repair. They were prospectively followed up for 12 months postrepair with serial questionnaires. The primary outcome was fecal incontinence at 12 months. Secondary outcomes were fecal urgency, flatus incontinence, perineal pain, dyspareunia, quality of life, and improvement of anal incontinence symptoms. RESULTS: Thirty-two women were randomized to each group. At 12 months, 24% (6/25) in the end-to-end and none in the overlap group reported fecal incontinence (P = .009, relative risk [RR] 0.07, 95% confidence interval [CI] 0.00-1.21, number needed to treat 4.2). Fecal urgency at 12 months was reported by 32% (8/25) in the end-to-end and 3.7% (1/27) in the overlap group (P = .02, RR 0.12, 95% CI 0.02-0.86, number needed to treat 3.6). There were no significant differences in dyspareunia and quality of life between the groups. At 12 months, 20% (5/25) reported perineal pain in the end-to-end and none in the overlap group (P = .04, RR 0.08, 95% CI 0.00-1.45, number needed to treat 5). During 12 months, 16% (4/25) in the end-to-end and none in the overlap group reported deterioration of defecatory symptoms (P = .01). CONCLUSION: Primary overlap repair of the external anal sphincter is associated with a significantly lower incidence of fecal incontinence, urgency, and perineal pain. When symptoms do develop, they appear to remain unchanged or deteriorate in the end-to-end group but improve in the overlap group. LEVEL OF

EVIDENCE: I.

Fecal Incontinence in Females Older Than Aged 40 Years: Who is at Risk?
Varma MG, Brown JS, Creasman JM, Thom DH, Van Den Eeden SK, Beattie MS, Subak LL Group.
Dis Colon Rectum. 2006 Jun;49(6):841-51.
PURPOSE: This study was designed to estimate the prevalence of, and identify risk factors associated with, fecal incontinence in racially diverse females older than aged 40 years. METHODS: The Reproductive Risks for Incontinence Study at Kaiser is a population-based study of 2,109 randomly selected middle-aged and older females (average age, 56 years). Fecal incontinence, determined by self-report, was categorized by frequency. Females reported the level of bother of fecal incontinence and their general quality of life. Potential risk factors were assessed by self-report, interview, physical examination, and record review. Multivariate logistic regression analysis was used to determine the independent association between selected risk factors and the primary outcome of any reported fecal incontinence in the past year. RESULTS: Fecal incontinence in the past year was reported by 24 percent of females (3.4 percent monthly, 1.9 percent weekly, and 0.2 percent daily). Greater frequency of fecal incontinence was associated with decreased quality of life (Medical Outcome Short Form-36 Mental Component Scale score, P = 0.01), and increased bother (P < 0.001) with 45 percent of females with fecal incontinence in the past year and 100 percent of females with daily fecal incontinence reporting moderate or great bother. In multivariate analysis, the prevalence of fecal incontinence in the past year increased significantly [odds ratio per 5 kg/m(2) (95 percent confidence interval)] with obesity [1.2 (1.1-1.3)], chronic obstructive pulmonary disease [1.9 (1.3-2.9)], irritable bowel syndrome [2.4 (1.7-3.4)], urinary incontinence [2.1 (1.7-2.6)], and colectomy [1.9 (1.1-3.1)]. Latina females were less likely to report fecal incontinence than white females [0.6 (0.4-0.9)]. CONCLUSIONS: Fecal incontinence, a common problem for females, is associated with substantial adverse affects on quality of life. Several of the identified risk factors are preventable or modifiable, and may direct future research in fecal incontinence therapy.

Rectal Volume Tolerability and Anal Pressures in Patients With Fecal Incontinence Treated With Sacral Nerve Stimulation.
Michelsen HB, Buntzen S, Krogh K, Laurberg S
Dis Colon Rectum. 2006 May 29;.
PURPOSE: Sacral nerve stimulation has proven to be a promising treatment for fecal incontinence when conventional treatment modalities have failed. There have been several hypotheses concerning the mode of action of sacral nerve stimulation, but the mechanism is still unclear. This study was designed to evaluate the results of rectal volume tolerability, rectal pressure-volume curves, and anal pressures before and six months after permanent sacral nerve stimulation and to investigate the mode of action of sacral nerve stimulation. METHODS: Twenty-nine patients with incontinence (male/female ratio = 6/23; median age, 58 (range, 29-79) years) underwent implantation of a permanent sacral electrode and neurostimulator after a positive percutaneous nerve evaluation test. Wexner incontinence score, rectal distention with thresholds for "first sensation," "desire to defecate," and "maximal tolerable volume," rectal pressure-volume curves, anal resting pressure, and maximum squeeze pressure were evaluated at baseline and at six months follow-up. RESULTS: Median Wexner incontinence score decreased from 16 (range, 6-20) to 4 (range, 0-12; P < 0. 0001). Median "first sensation" increased from 43 (range, 16-230) ml to 62 (range, 4-186) ml (P = 0.1), median "desire to defecate" from 70 (range, 30-443) ml to 98 (range, 30-327) ml (P = 0.011), and median "maximal tolerable volume" from 130 (range, 68-667) ml to 166 (range, 74-578) ml (P = 0.031). Rectal pressure-volume curves showed a significant increase in rectal capacity (P < 0.0001). The anal resting pressure increased significantly from 31 (range, 0-109) cm H(2)O to 38 (range, 0-111) cm H(2)O (P = 0.045). No significant increase in maximum squeeze pressure was observed. CONCLUSIONS: For patients with fecal incontinence successfully treated with sacral nerve stimulation, there was a significant increase in rectal volume tolerability and rectal capacity. A significant increase in anal resting pressure, but not in maximum squeeze pressure, was found. We suggest that sacral nerve stimulation causes neuromodulation at spinal level.

Incisional hernia after a tension-free vaginal tape procedure.
Duggan P, Williams R

Int Urogynecol J Pelvic Floor Dysfunct. 2006 May 12;.
A case is presented of an incisional hernia of the inguinal canal presenting 9 months after a tension-free vaginal tape (TVT) procedure and anterior vaginal repair. The TVT and repair procedure was complicated by prolonged postoperative urinary retention requiring midline incision of the tape for resumption of normal voiding. The patient had a hysterectomy several years earlier via a Pfannenstiel incision. No other risk factors for hernia were identified. There are no previous reports of TVT-related incisional hernia. We conclude that incisional hernia is a rare complication of the TVT procedure and that the characteristics of the TVT tape may contribute to late occurrence of herniation.

Severe soft tissue infection of the thigh after vaginal erosion of transobturator tape for stress urinary incontinence.
Karsenty G, Boman J, Elzayat E, Lemieux MC, Corcos J
Int Urogynecol J Pelvic Floor Dysfunct. 2006 May 24;.
Since the beginning of use of synthetic midurethral slings, several complications, usually benign, have been reported. Recently, three consecutive cases of severe thigh infection secondary to transobturator insertion of a synthetic tape alarmed us. This is a case report about these three cases and a review of literature about complications of transobturator tapes.

Delayed urethral erosion after tension-free vaginal tape.
Powers K, Lazarou G, Greston WM
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Aug;17(4):422-5. Epub 2006 Apr 26.
Urethral erosions have been reported with various sling materials placed by means of various techniques. The patient often presents in the immediate postoperative period, although late presentations have been described. The diagnosis is made on cystoscopy, and mesh excision with urethral reconstruction is advocated. We present the cases of two patients with urethral erosion after mid-urethral polypropylene sling who presented 3 months after surgery with urethral pain, mid-urethral blockage and symptoms of bladder dysfunction. Urethroscopy revealed the mesh bridging the lumen of the urethra. Trans-vaginal mesh excision and layered urethral reconstruction was curative in both patients.

Outcomes following erosions of the artificial urinary sphincter.
Raj GV, Peterson AC, Webster GD
J Urol. 2006 Jun;175(6):2186-90; discussion 2190.
PURPOSE: Artificial urinary sphincter urethral cuff erosion occurs in up to 5.0% of cases, presenting a complex management problem. We examine our experience with the eroded AUS, relating to preoperative risk factors, operative management and outcomes. MATERIALS AND METHODS: We reviewed the medical records of 637 patients undergoing bulbar urethral AUS implantation from 1990 to 2003 for demographic and surgical variables. RESULTS: Of the 637 records reviewed, 46 patients underwent 54 explantations of the AUS device for erosions, including 13 who had the primary implant performed at our institution and 33 being referred for management of erosion after implantation elsewhere. Our institution erosion rate was 2.2%. Mean followup after AUS reimplant following erosion was 27.8 months (range 1 to 180). Comorbidities were more prevalent in patients with erosions included hypertension ($p = 0.006$), coronary artery disease ($p = 0.03$), prior radiation therapy ($p = 0.006$) and prior AUS revisions ($p = 0.0001$). A majority of patients had persistent mild incontinence (0 to 1 pad daily in 29 or 56.8%), moderate (1 to 3 pads daily in 9 or 17.4%) and severe (more than 3 pads daily in 6 or 11.8%) incontinence after secondary AUS implantation. Patients who underwent reimplantation after AUS cuff erosions have a significantly higher rate of second erosions (in 16, 34.8%) within an average of 6.7 months (range 3 to 24), including our own 11.8% institutional rate (in 4). CONCLUSIONS: Our study suggests that patients with comorbidities including hypertension, coronary artery disease, prior radiation therapy and prior AUS revisions are more likely to have erosions of their AUS. Nevertheless, continence can still be salvaged using various strategies which optimize use of the remaining healthy urethral tissue.

Failure of sacral nerve stimulation due to migration of tined lead.
Deng DY, Gulati M, Rutman M, Raz S, Rodriguez LV
J Urol. 2006 Jun;175(6):2182-5.

PURPOSE: Stimulation of the sacral nerves is a commonly used treatment for frequency, urgency, urge incontinence, retention and other types of voiding dysfunction. Minimally invasive placement of a percutaneous permanent quadripolar tined lead into the sacral foramen has been described. No lead migration has been reported. We report on our experience with lead migration and the subsequent failure of InterStim in a large cohort of patients with a focus on possible diagnostic and salvage techniques. MATERIALS AND METHODS: Between February 2002 and April 2005 tined lead electrodes were implanted in the S3 foramen in 235 patients using the InterStim system. Patients with a good response during the testing phase (greater than 50% improvement) underwent placement of an implantable pulse generator. Position was confirmed by radiographic evaluation intraoperatively. Sacral radiographs were obtained at the first postoperative visit, after IPG placement and whenever there was a change in symptomatic response. RESULTS: There were 5 patients (2.1%) in whom treatment failed after a successful trial of stimulation due to lead migration. This was seen as early as 3 weeks and as late as 8 months. Migration of the lead occurred between first and second stage implantation in 1 of the 5 cases, and occurred after the second stage in 4 of 5. Anterior migration was noted in 4 patients and posterior migration was noted in 1. CONCLUSIONS: Lead migration after placement of the tined lead can occur and thus sacral radiographs should be routinely used. This complication can be easily resolved without significant morbidity to the patient.

Vaginal mesh extrusion associated with use of mentor transobturator sling.
Morey AF
J Urol. 2006 Jun;175(6):2164-5.

Complications of transvaginal silicone-coated polyester synthetic mesh sling.
Morey AF
J Urol. 2006 Jun;175(6):2164-5.

7 – PAIN 2006

Long-term outcomes after surgical and nonsurgical management of chronic pelvic pain: One year after evaluation in a pelvic pain specialty clinic.
Lamvu G, Williams R, Zolnoun D, Wechter ME, Shortliffe A, Fulton G, Steege JF
Am J Obstet Gynecol. 2006 May 24;.
OBJECTIVE: The purpose of this study was to describe long-term outcomes for women with chronic pelvic pain (CPP) after evaluation in a CPP specialty clinic. STUDY DESIGN: This was a prospective observational cohort study of women treated for CPP at the UNC Pelvic Pain clinic between 1993 and 2000. The primary outcome was improvement in pain and the main exposure was treatment group: primarily medical (pharmacotherapy, psychotherapy, physical therapy, or combinations of the 3) or surgical (hysterectomy, resection or ablative procedures, oophrectomy, diagnostic surgery, pain mapping, vulvar or vestibular repair). Univariate, bivariate, and multivariable analyses were performed to look for relationships between background characteristics, treatment group, and improvement in pain. RESULTS: Of 370 participants; 189 had surgical treatment and 181 had medical treatment. One year after evaluation, 46% reported improvement in pain and 32% improvement in depression. Improvement in pain was similar in both treatment groups and odds of improvement were equal even after adjusting for background characteristics, psychosocial comorbidity, and previous treatments. CONCLUSION: One year after evaluation in a CPP specialty clinic, women experienced modest improvements in pain and depression after recommended surgical or nonsurgical treatment.

Use of telemedicine in chronic pain consultation: a pilot study.
Peng PW, Stafford MA, Wong DT, Salenieks ME
Clin J Pain. 2006 May;22(4):350-2.
OBJECTIVES: Telemedicine has been used extensively in various settings, including monitoring patient treatment response and counseling. However, there are few data on the application of telemedicine to chronic pain patients. The present study was the first pilot project to determine whether telemedicine technology for chronic pain consultation was feasible, cost-saving, and satisfactory to patients and pain

physicians. METHODS: A prospective pilot study was conducted on chronic pain patients requiring follow-up consultations using telemedicine technology. Patients were interviewed by phone following the consultation. RESULTS: Eleven telemedicine anesthesia consultations involving eight patients (age 42+/-9 years; six men, two women) were performed. All were follow-up consultations. The average distance from patients' home to the clinic was 314+/-170 km. The reasons for consultation were for update of patient progress (10/11), medication change (6/11), and counseling (3/11). The time to complete the consultation was 24.5+/-9.5 minutes. The data for the time and the cost that the patient spent on the consultation are presented as median and 25% to 75% interquartile range. Patients having telemedicine consultations spent 0.9 hours (0.83-1) and Canadian dollar 3 (dollar 2-4) versus an estimate of 8 hours (6-8) and Canadian dollar 80 (dollar 46-260) for a conventional consultation (both P<0.005). Telemedicine consultation was found to be highly satisfactory to the patient and the consulting and attending anesthesiologists. CONCLUSIONS: This pilot study indicates that telemedicine follow-up consultations for chronic pain patients are feasible and cost-saving. Patients and anesthesiologists were highly satisfied with telemedicine consultation. Patients reported a significant saving in time and cost compared with a conventional consultation.

A new classification is needed for pelvic pain syndromes--are existing terminologies of spurious diagnostic authority bad for patients?
Abrams P, Baranowski A, Berger RE, Fall M, Hanno P, Wesselmann U
J Urol. 2006 Jun;175(6):1989-90.

Persistent postsurgical pain: risk factors and prevention.
Kehlet H, Jensen TS, Woolf CJ
Lancet. 2006 May 13;367(9522):1618-25.
Acute postoperative pain is followed by persistent pain in 10-50% of individuals after common operations, such as groin hernia repair, breast and thoracic surgery, leg amputation, and coronary artery bypass surgery. Since chronic pain can be severe in about 2-10% of these patients, persistent postsurgical pain represents a major, largely unrecognised clinical problem. Iatrogenic neuropathic pain is probably the most important cause of long-term postsurgical pain. Consequently, surgical techniques that avoid nerve damage should be applied whenever possible. Also, the effect of aggressive, early therapy for postoperative pain should be investigated, since the intensity of acute postoperative pain correlates with the risk of developing a persistent pain state. Finally, the role of genetic factors should be studied, since only a proportion of patients with intraoperative nerve damage develop chronic pain. Based on information about the molecular mechanisms that affect changes to the peripheral and central nervous system in neuropathic pain, several opportunities exist for multimodal pharmacological intervention. Here, we outline strategies for identification of patients at risk and for prevention and possible treatment of this important entity of chronic pain.

Increased prevalence of interstitial cystitis in women with detrusor overactivity refractory to anticholinergic therapy.
Wein AJ
J Urol. 2006 Jun;175(6):2209.

Is the potassium sensitivity test a valid and useful test for the diagnosis of interstitial cystitis?
Wein AJ
J Urol. 2006 Jun;175(6):2208-9.

Heat/burning sensation induced by topical application of capsaicin on perineal cutaneous area: new approach in diagnosis and treatment of chronic prostatitis/chronic pelvic pain syndrome?
Turini D, Beneforti P, Spinelli M, Malagutti S, Lazzeri M
Urology. 2006 May;67(5):910-3.
OBJECTIVES: To investigate the feasibility, safety, and efficacy of perineal cutaneous application of capsaicin as a test for the diagnosis, as well as a potential therapeutic tool, in patients with chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS). METHODS: We recruited 22 patients (mean age 34.5 years, range 19 to 56), who had been diagnosed with CP/CPPS according to the National Institutes of Health criteria, and 6 healthy control subjects. Both groups received a topical application of 5 mL capsaicin at a

concentration of 10(-5) M to the perineal body skin. The patients were asked to mark on a visual analogue scale the intensity of any heat or burning sensation. All the patients had completed a National Institutes of Health Chronic Prostatitis Symptom Index before and 1 week after the test. The scores of the two groups were compared using the Mann-Whitney U test. RESULTS: The patients with CP/CPPS reported a heat/burning sensation intensity that was statistically greater than that of the healthy controls (7.5 versus 4.3, P <0.001) and a shorter time to heat sensation onset and maximal intensity (1.5 versus 3.4 minutes, P <0.001, and 2.5 versus 7 minutes, P <0.001, respectively). Of the 22 patients, 16 reported an improvement of symptoms after 7 days and the mean National Institutes of Health Chronic Prostatitis Symptom Index score decreased from 27 to 16 (P <0.01). CONCLUSIONS: We found a statistically significant difference in the pain visual analogue scale and interval between topical application and the onset of the heat/burning sensation between patients with CP/CPPS and healthy controls. The small sample size strongly suggests the need for additional larger and more controlled studies.

Distension of painful structures in the treatment for chronic pelvic pain in women.
Heyman J, Ohrvik J, Leppert J
Acta Obstet Gynecol Scand. 2006;85(5):599-603
BACKGROUND: There is a lack of established treatment for Chronic pelvic pain (CPP), defined as acyclic pain of at least six months duration. We decided to study the pain-alleviating effects of stretching on defined structures in women with CPP, and the treatment's impact on quality of life variables. DESIGN OF STUDY: An open, randomized study. SETTING: Primary Health Care Centre, Kolback, Sweden. METHODS: Fifty women, median age 33 years (range 19-54), complaining of CPP for a median duration of 25.5 months (range 6-264) were randomly assigned to either a treatment or a control group. A short questionnaire containing 17 questions was administered before randomization and two to three weeks after a second treatment of distension of pelvic structures. Visual analog scales were used for questions concerning intensity of pain and quality of life. Five-point scales were used for questions dealing with duration and frequency of pain. RESULTS: Intensity, frequency and duration of pelvic pain, painful intercourse, lower back pain, sleep disturbance, sleep quality, mental fatigue, depression, mood and anger improved significantly more in the treatment group than in the control group. Treatment proved more effective than counseling as reflected by self-rating scales: pain intensity (OR 18.37, 95% CI 3.39-99.64) and pain during intercourse (OR 8.59, 95% CI 1.57-46.68). CONCLUSION: In this open, randomized study, distension of painful pelvic structures in women with CPP resulted in significant relief of pain and improvement in quality of life measures.

Endoscopic treatment of deep infiltrating endometriosis (DIE) involving the bladder and rectosigmoid colon.
Langebrekke A, Istre O, Busund B, Johannessen HO, Qvigstad E
Acta Obstet Gynecol Scand. 2006;85(6):712-5.
Background. To study the feasibility, complications and symptom relief of laparoscopic treatment in patients with deep infiltrating endometriosis. Methods. From January 2004 to March 2005, 24 patients with deep infiltrating endometriosis were treated with laparoscopic techniques. Preoperative symptoms, staging, involvement of the disease, and surgical procedures were recorded. Operating time and perioperative complications were also registered, as well as follow-up of the patients. Results. The surgical treatment was individualized with removal of deep infiltrating endometriosis in all 24 patients, additional bladder resection in five patients and colorectal resection in eight patients. In two cases laparoconversion was performed, and one patient had a temporary loop ileostomy. We observed no major peri- or postoperative complications. Median operating time was 3.4 h (range 1.4-8.0 h). All patients with bladder involvement were relieved of their urinary dysfunction, while all except three patients were successfully treated for their pain problems, and also these three patients had symptom relief. Conclusions. Patients with deep infiltrating endometriosis represent a challenge to surgical procedures. Our results show that radical laparoscopic surgery including colorectal and bladder resection is feasible, safe, and effective in almost all patients.

Musculoskeletal pain and menopausal status.
Dugan SA, Powell LH, Kravitz HM, Everson Rose SA, Karavolos K, Luborsky J
Clin J Pain. 2006 May;22(4):325-31.

OBJECTIVES: The authors examined whether self-reported menopausal status is associated with musculoskeletal pain in a multiethnic population of community-dwelling middle-aged women after considering sociodemographics, medical factors, smoking, depression, and body mass index using a cross-sectional study design. METHODS: Participants were 2218 women from the Study of Women's Health Across the Nation assessed at the time of their third annual follow-up exam. Two dependent variables were derived from a factor analysis of survey questions about pain. These 2 outcomes were Aches and Pains, derived from 5 of 6 pain symptom questions and Consultation for Low Back Pain, derived from 1 question. RESULTS: Prevalence of aches and pains was high, with 1 in 6 women reporting daily symptoms. Compared with premenopausal women, those who were early perimenopausal (P=0.002), late perimenopausal (P=0.002), or postmenopausal (P<0.0001) reported significantly more aches and pains in age-adjusted analysis. With complete risk factor adjustment, postmenopausal women still reported significantly greater pain symptoms (P=0.03) than did premenopausal women. Menopausal status was marginally related to consulting a healthcare provider for back pain. DISCUSSION: This study demonstrates an association between pain and self-reported menopausal status, with postmenopausal women experiencing greater pain symptoms than premenopausal women.
Curr Opin Obstet Gynecol. 2006 Jun;18(3):333-337.

A conceptual model for the pathophysiology of vulvar vestibulitis syndrome.
Zolnoum D, Hartmann K, Lamvu G, As-Sanie S, Maixner W, Steege J
Obstet Gynecol Surv. 2006 Jun;61(6):395-401; quiz 423.
Vulvar vestibulitis syndrome (vestibulitis), the most common type of chronic vulvovaginal pain, impairs the psychologic, physical, and reproductive health of approximately 10% of women at some point in their lives. Research on the pathophysiology of vestibulitis suggests abnormalities in 3 interdependent systems: vestibular mucosa, pelvic floor muscles, and central nervous system pain regulatory pathways. To date, causes and relative contributions of these abnormalities to the development and maintenance of vestibulitis remain poorly understood. Research consistently supports the conceptualization of vestibulitis as a chronic pain disorder-akin to fibromyalgia, irritable bowel disorder, and temporomandibular disorder (TMD)-that is far more complex than vestibular hypersensitivity alone. Nevertheless, the clinical diagnosis of vestibulitis continues to rely on subjective report of pain during intercourse and vestibular sensitivity on clinical examination after exclusion of other gynecologic disorders. We propose that current diagnostic criteria, which are based on highly subjective patient and clinician measures, are not sufficient to describe and properly classify the heterogeneous clinical presentations of this disorder. To inform clinical care or research, we must be able to objectively characterize women with vestibulitis. This narrative review critically appraises current conceptualization of vestibulitis and presents a context for studying vestibulitis as a chronic pain disorder, emphasizing the need for objective assessment of clinical features. TARGET AUDIENCE: Obstetricians & Gynecologists, Family Physicians. LEARNING OBJECTIVES: After completion of this article, the reader should be able to state that vulvar vestibulitis is common; recall that the disorder has three major pathophysiological pathways and that understanding of these pathways is important in selecting treatment options, and explain that the clinician must attempt to properly classify the clinical presentations of the disorder.

Randomised double-blind placebo-controlled trial of aloe vera for irritable bowel syndrome.
Davis K, Philpott S, Kumar D, Mendall M
Int J Clin Pract. 2006 Jun 2;.
Aloe vera (AV) is suggested to be beneficial in treating irritable bowel syndrome (IBS) symptoms, but no scientific trials exist to confirm this. We aim to assess the efficacy of AV on IBS in refractory secondary care patients. Patients with IBS were randomised to receive AV or matching placebo for a month. Symptoms were assessed at baseline, 1 and 3 months. Fifty-eight patients randomised, 49 completed the protocol to 1 month and 41 to 3 months. Eleven of thirty-one (35%) AV patients, and 6 of 27 (22%) placebo patients responded at 1 month (p = 0.763). Diarrhoea predominant patients showed a trend towards a response to treatment at 1 month (10/23 V 2/14, p = 0.07). There was no evidence that AV benefits patients with IBS. However, we could not rule out the possibility that improvement occurred in patients with diarrhoea or alternating IBS whilst taking AV. Further investigations are warranted in patients with diarrhoea predominant IBS, in a less complex group of patients.

The Incidence of Irritable Bowel Syndrome Among Community Subjects With Previous Acute Enteric Infection.
Borgaonkar MR, Ford DC, Marshall JK, Churchill E, Collins SM
Dig Dis Sci. 2006 Jun 7;.
The purpose of this study was to determine the incidence of postinfectious irritable bowel syndrome (IBS) among community subjects with positive stool studies. This was a prospective cohort study whereby all individuals with stool-positive acute enteric infection (AEI) were recruited from 3 health regions in Ontario, Canada. Each person completed questionnaires regarding preinfectious bowel habit and their bowel habit 3 months postinfection. Manning and Rome I criteria were used to diagnose irritable bowel syndrome. Two hundred thirty-one patients participated. Forty had preexisting IBS and were excluded. Of the remaining 191 patients, 7 developed irritable bowel syndrome, for an incidence of 3.7% (95% confidence interval: 1.0-6.3%). Fever during AEI was the only identifiable risk factor for developing postinfectious IBS (odds ratio, 11.96; P = .02). The incidence of postinfectious IBS in community subjects is 3.7%. Fever during the AEI may be an important risk factor for this condition.

Quality of Life and Chronic Pain Four Years After Gastrointestinal Surgery.
Bruce J, Krukowski ZH
Dis Colon Rectum. 2006 Jun 2;.
PURPOSE: Little is known about the prevalence of chronic postsurgical pain after gastrointestinal surgery. This study was designed to assess the prevalence of chronic pain andquality of life in a cohort of patients who underwent surgery for benign and malignant gastrointestinal disease. METHODS: A prospective cohort design was used to assess quality of life and morbidity at four years postoperatively in435 patients who had upper, hepatopancreaticobiliary, small-bowel, and/or colorectal anastomotic surgery in 1999 at one regional center in Northeast Scotland. Chronic pain and quality of life were assessed by postal survey using the European Organization for Research and Treatment of Cancer Quality of Life-C30 questionnaire and McGill Pain Questionnaire. RESULTS: Of the 435 patients recruited in 1999, 135 (31 percent) had died by censor date in 2003. There was a 74 percent (n = 202) response rate from surviving patients eligible for follow-up. Prevalence of chronic pain at four years postoperatively was 18 percent (95 percent confidence interval, 13-23 percent). Pain was predominantly neuropathic in character; a subgroup reported moderate-to-severe pain. Risk factors for chronic postsurgical pain included female gender, younger age, and surgery for benign disease. Compared with those who were pain-free at follow-up, patients with chronic pain had poorer functioning, poorer global quality of life, and more severe symptoms, independent of age, gender, and cancer status. CONCLUSIONS: The prevalence of chronic pain after laparotomy for gastrointestinal malignancy and nonmalignant conditions at four years after surgery was 18 percent. These patients had significantly poorer quality of life scores independent of age, gender, and cancer status.

Repetitive rectal painful distention induces rectal hypersensitivity in patients with irritable bowel syndrome.
Nozu T, Kudaira M, Kitamori S, Uehara A
J Gastroenterol. 2006 Mar;41(3):217-22.
BACKGROUND: A reduced rectal perceptual threshold has been reported in patients with irritable bowel syndrome (IBS), but this phenomenon may be induced by a comorbid psychological state. We evaluated the rectal pain threshold at baseline and after conditioning (repetitive rectal painful distention: RRD) in patients with IBS or functional abdominal pain syndrome (FAPS), which is an abdominal pain disorder, and in healthy controls, and determined whether rectal hypersensitivity is a reliable marker for IBS. METHODS: The rectal sensory threshold was assessed by a barostat. First, a ramp distention of 40 ml/min was induced, and the threshold of pain and the maximum tolerable pressure (mmHg) were measured. Next, RRD (phasic distentions of 60-s duration separated by 30-s intervals) was given with a tracking method until the subjects had complained of pain six times. Finally, ramp distention was induced again, and the same parameters were measured. The normal value was defined by calculating the 95% confidence intervals of controls. RESULTS: Five or six of the seven IBS patients showed a reduced rectal pain threshold or maximum tolerable pressure, respectively, at baseline. In all patients with IBS, both thresholds were reduced after RRD load, but they were reduced in none of the patients with FAPS. RRD significantly reduced both thresholds in

the IBS group (P < 0.05), but it had no effect in the control or FAPS groups. CONCLUSIONS: Rectal hypersensitivity induced by RRD may be a reliable marker for IBS. Conditioning-induced visceral hypersensitivity may play a pathophysiologic role in IBS.

8 – FISTULAE 2006 05

Management of enterovaginal fistulae in a colorectal unit.
Kavanagh DO, Neary P, Dodd JD, Sheahan K, O'Donoghue D, Hyland JM
Tech Coloproctol. 2006 Mar;10(1):63-4.

Gracilis Muscle Transposition for Fistulas Between the Rectum and Urethra or Vagina.
Zmora O, Tulchinsky H, Gur E, Goldman G, Klausner JM, Rabau M
Dis Colon Rectum. 2006 Jun 6;.
PURPOSE: This study was designed to assess the efficacy of gracilis muscle transposition in repairing rectovaginal and rectourethral fistulas. METHODS: Data were retrieved from a retrospective chart review of patients who underwent gracilis muscle transposition for fistulas between the rectum and urethra/vagina. All patients had fecal diversion as a preliminary or concurrent step to fistula repair. Follow-up data were gathered from outpatient clinic visits. Success was defined as a healed fistula after stoma closure. RESULTS: Six females and three males, aged 30 to 64 years, underwent gracilis muscle transpositions from 1999 to 2005. One pouch-vaginal, three rectourethral, and five rectovaginal fistulas were repaired. The etiologies were Crohn's disease (n = 2), iatrogenic injury to the rectum during radical prostatectomy (n = 2), previous pelvic irradiation for rectal cancer (n = 2) or for cervical cancer (n = 1), recurrent perianal abscesses with fistulas (n = 1), and obstetric tear (n = 1). Seven patients underwent previous medical and surgical repair attempts. There were no intraoperative complications. Postoperative complications included perineal wound infection (n = 1) and at the colostomy closure (n = 2). There were no long-term sequelae. At a median follow-up period of 14 (range, 1-66) months since stoma closure, the fistula healed in seven patients. One patient refused ileostomy closure. One patient with severe Crohn's proctitis has a persistent rectovaginal fistula. CONCLUSIONS: Gracilis muscle transposition is a viable option for repairing fistulas between the urethra, vagina, and the rectum, especially after failed perineal or transanal repairs. It is associated with low morbidity and a good success rate. Underlying Crohn's disease and previous radiation are associated with poor prognosis.

Robotic repair of vesicovaginal fistula: case series of five patients.
Sundaram BM, Kalidasan G, Hemal AK
Urology. 2006 May;67(5):970-3.
OBJECTIVES: To describe a technique of robotic repair of vesicovaginal fistula (VVF) and present our experience with 5 such patients. METHODS: A total of 5 patients were diagnosed with posthysterectomy (n = 4) or postmyomectomy (n = 1) VVF. All patients were first treated conservatively with continuous drainage using a Foley catheter without any success. After 12 weeks, these patients underwent robotic repair of the VVF. The steps of the technique of robotic repair are (a) vaginoscopy, (b) cystoscopy, (c) bilateral ureteral catheterization, (d) placement of ports for robotic repair, (e) peritoneoscopy, (f) lysis of adhesions, (g) incision of the bladder and cystotomy in reverse tennis racquet fashion encircling the fistula, (h) excision and freshening of the fistulous margins after complete separation of the bladder from the vagina, (i) closure of the vaginal opening horizontally and bladder opening vertically with interrupted Vicryl sutures, and, finally, (j) interposition of the omentum between these suture lines. RESULTS: Fistula repair was successful in all cases, with a mean operative time (from cystoscopy to the end of the procedure) of 233 minutes (range 150 to 330) and estimated blood loss of less than 70 mL. The length of hospital stay was a mean of 5 days (range 4 to 7). The Foley catheter was removed on the 10th postoperative day after voiding cystourethrography. At 6 months of follow-up, these patients continued to void normally without any recurrence of VVF. CONCLUSIONS: These data suggest that robot-assisted VVF repair is feasible and results in lower morbidity, a shorter hospital stay, and a quicker recovery. The minimally invasive approach of robot-assisted VVF repair may be a more attractive option for patients with VVF.

Successful management of vesicouterine fistula by luteinizing hormone-releasing hormone analog.
Yokoyama M, Arisawa C, Ando M
Int J Urol. 2006 Apr;13(4):457-9.
Vesicouterine fistula is a rare complication of cesarean section. Although surgical repair was mandatory for the management of the fistula previously, a recent review showed high efficacy of hormonal manipulation by the induction of amenorrhea. Herein, we report a new case of vesicouterine fistula secondary to cesarean section successfully treated by luteinizing hormone-releasing hormone analog for 6 months. Conservative hormonal treatment for vesicouterine fistula caused by cesarean section should be considered before surgical repair.

Prognostic factors of recurrence after vesicovaginal fistula repair.
Ayed M, El Atat R, Hassine LB, Sfaxi M, Chebil M, Zmerli S
Int J Urol. 2006 Apr;13(4):345-9.
PURPOSE: We evaluate the prognostic factors of recurrence in patients after the surgical repair of vesicovaginal fistula. MATERIALS AND METHODS: From 1985 to 2002, 73 women with vesicovaginal fistula underwent late (> 3 months) surgical repair. A multivariate analysis of the data was performed with the EPI-INFO software. All P-values were two-sided, with odds ratio and 95% confidence intervals. RESULTS: A total number of 73 patients underwent 97 procedures with a mean rate of 1.38 procedures/patient. The overall surgical success rate was 86.7%. Multivariate analysis demonstrated that recurrence was statistically significant for multiple fistulas (single vs two or more), fistula size (>10 mm), fistula type (Type I vs Type II), fistula etiology (obstetrical vs non-obstetrical) and the presence of urinary tract infection before the repair. Recurrence risk was fivefold higher for both the size and the type of the fistula, threefold higher for obstetrical etiology and 4.5-fold higher for multiple fistula. The interposition of flaps was a protective factor for recurrent cases. The surgical approach was not a significant prognostic factor of recurrence. CONCLUSION: Successful closure of a vesicovaginal fistula requires an accurate and a timely repair using procedures that exploit basic surgical principles. Multiple fistula, size and type of the fistula, and obstetrical etiology were the recurrence risk factors. We recommend in all patients with multiple risk factors for recurrence, the interposition of flaps.

Colovesical fistula complicating diverticular disease: one-stage resection.
Carvajal Balaguera J, Camunas Segovia J, Pena Gamarra L, Oliart Delgado de Torres S, Martin Garcia-Almenta M, Viso Ciudad S, Fernandez IP, Gomez Maestro P, Cerquella Hernandez C
Int Surg. 2006 Jan-Feb;91(1):17-23.
Colonic diverticular disease is common in developed countries, and its prevalence increases with age. Most affected individuals remain asymptomatic throughout their lives, and relatively few patients require surgical intervention for obstructive or inflammatory complications. Colovesical fistula is the most common type (65%) of fistula associated with colonic diverticular disease. Primary resection of sigmoid colon with colorectal anastomosis performed as a one-stage procedure is its definitive treatment and can be performed safely--as simple closure, using an omental flap, or through resection and closure of bladder defect--in 90% of the patients. We report our experience with four patients suffering from colovesical fistula who were treated with primary resection of sigmoid colon and colorectal anastomosis performed as a one-step procedure. In our experience, diverting colostomy or Hartmann intervention is not recommended because of the lack of fistula definitive resolution and the possibility of additional complications.

Autologous fibroblasts transplant after infliximab administration: a new approach in Crohn's perianal fistulas? : Brief Clinical Report.
Ascanelli S, de Tullio D, Gregorio C, Azzena G, Occhionorelli S
Int J Colorectal Dis. 2006 May 30;.

9 – BEHAVIOUR Psychology Sexology 2006 05
The prevalence of emotional abuse in gynaecology patients and its association with gynaecological symptoms.

Johnson JK, John R, Humera A, Kukreja S, Found M, Lindow SW
Eur J Obstet Gynecol Reprod Biol. 2006 Jun 3;.
AIM: To determine the lifetime prevalence of emotional abuse in a population of women attending a gynaecology outpatient clinic and also to investigate whether women who reported emotional abuse were more likely to complain of certain gynaecological symptoms. SETTING: A gynaecology outpatient clinic in a North of England Hospital. METHODS: Anonymous confidential questionnaire given to women. RESULTS: Nine hundred and twenty consecutive women were included, 825 questionnaires were returned (90% response rate). The prevalence of emotional abuse was 24% (198/825). Emotional abuse is four times less common in women over 50 years old. Of the fifteen presenting symptoms reported by the women, referral for termination of pregnancy, cervical smear abnormality, worry about cancer and urinary incontinence were significantly more common in the group who reported emotional abuse. The women with emotional abuse also had significantly more consultations; however, the duration of their symptoms was not significantly different. CONCLUSION: The prevalence of emotional abuse in a group of women attending the gynaecology outpatient clinic in a North of England Hospital was 24%. Women who are subjected to emotional abuse tend to have more consultations and are more likely to complain of certain symptoms.

Emotional stress reactivity in irritable bowel syndrome.
Bach DR, Erdmann G, Schmidtmann M, Monnikes H
Eur J Gastroenterol Hepatol. 2006 Jun;18(6):629-636.
OBJECTIVES: Irritable bowel syndrome (IBS) has been proposed to be a stress-related disorder. Research on stress reactivity in IBS has yielded ambiguous results, regarding responses to physical and mental stress. This study aimed to investigate the responses to emotional stress in IBS patients. METHODS: Twelve IBS patients and 12 healthy individuals underwent public speaking anticipation as an emotional stressor and a control situation. Stress reactivity was quantified by subjective and psychophysiological measures. RESULTS: Stress responses were elicited in healthy controls and IBS patients. Differential stress responses were observed in measurements of heart rate. There was no change in rectal sensitivity under stress, whereas patients exhibited lower discomfort thresholds than healthy controls in all conditions. CONCLUSION: This study measured reactivity to an emotional stressor in IBS. It provides evidence that there is a specific alteration of stress responses in IBS patients, but no overall exaggerated stress response. IBS patients showed a broader and less specific response to emotional stress than healthy controls. Rectal sensitivity was unchanged under emotional stress both in IBS patients and healthy controls.

Features associated with laxative abuse in individuals with eating disorders.
Tozzi F, Thornton LM, Mitchell J, Fichter MM, Klump KL, Lilenfeld LR, Reba L, Strober M, Kaye WH, Bulik CM
Psychosom Med. 2006 May-Jun;68(3):470-7.
OBJECTIVE: Laxative abuse is common in patients with anorexia and bulimia nervosa and has been associated with longer duration of illness, suicide attempts, impulsivity, and greater eating and general psychopathology. We explored the extent to which laxative abuse was associated with specific psychopathological features across eating disorder subtypes. METHODS: Participants were 1021 individuals from the multisite, International Price Foundation Genetic Studies. Axis I disorders, personality disorders and traits, and obsessive compulsive features were assessed. RESULTS: Laxative abuse was associated with worse eating disorder and general psychopathology and higher prevalence of borderline personality disorder (BPD). Symptom level analyses revealed that specific features of BPD, including suicidality and self-harm, feelings of emptiness, and anger, were most strongly associated with laxative abuse. CONCLUSIONS: The function of laxative abuse may differ across individuals with eating disorders, alternatively serving as a method of purging and a form of self-harm.

To "lump" or to "split" the functional somatic syndromes: can infectious and emotional risk factors differentiate between the onset of chronic fatigue syndrome and irritable bowel syndrome?
Moss-Morris R, Spence M
Psychosom Med. 2006 May-Jun;68(3):463-9.
OBJECTIVES: Recent academic debate has centered on whether functional somatic syndromes should be defined as separate entities or as one syndrome. The aim of this study was to investigate whether there may

be significant differences in the etiology or precipitating factors associated with two common functional syndromes, irritable bowel syndrome (IBS) and chronic fatigue syndrome (CFS). METHODS: We prospectively studied 592 patients with an acute episode of Campylobacter gastroenteritis and 243 with an acute episode of infectious mononucleosis who had no previous history of CFS or IBS. At the time of infection, patients completed a baseline questionnaire that measured their levels of distress using the Hospital Anxiety and Depression scale. At 3- and 6-month follow-up, they completed questionnaires to determine whether they met published diagnostic criteria for chronic fatigue (CF), CFS, and/or IBS. RESULTS: The odds of developing IBS were significantly greater post-Campylobacter than post-infectious mononucleosis at both 3- (odds ratio, 3.45 [95% confidence interval (CI), 1.75-6.67]) and 6- (2.22 [95% CI, 1.11-6.67]) month follow-up. In contrast, the odds for developing CF/CFS were significantly greater after infectious mononucleosis than after Campylobacter at 3 (2.77 [95% CI, 1.08-7.11]) but not 6 (1.48 [95% CI, 0.62-3.55]) months postinfection. Anxiety and depression were the strongest predictors of CF/CFS, whereas the nature of the infection was the strongest predictor of IBS. CONCLUSIONS: These results support the argument to distinguish between postinfectious IBS and CFS. The nature of the precipitating infection appears to be important, and premorbid levels of distress appear to be more strongly associated with CFS than IBS, particularly levels of depression.

Psychiatric comorbidities of female inpatients with eating disorders.
Blinder BJ, Cumella EJ, Sanathara VA
Psychosom Med. 2006 May-Jun;68(3):454-62.
OBJECTIVE: We analyze 27 point-prevalent DSM-IV Axis I comorbidities for eating disorder inpatients. METHODS: The sample included 2436 female inpatients treated between January 1, 1995, and December 31, 2000, for primary DSM-IV diagnoses of anorexia, bulimia, and eating disorder not otherwise specified. Analyses were multivariate analysis of variance and multinomial logistic regression; sociodemographics and severity-of-illness measures were controlled. RESULTS: Ninety-seven percent of patients evidenced > or = 1 comorbid diagnoses; 94% evidenced comorbid mood disorders, largely unipolar depression, with no differences across eating disorders; 56% evidenced anxiety disorders, with no differences across eating disorders; and 22% evidenced substance use disorders, with significant differences across eating disorders ($p < .0001$). Five specific diagnoses differed across eating disorders. Alcohol abuse/dependence was twice as likely with bulimia ($p < .0001$); polysubstance abuse/dependence three times as likely with bulimia ($p < .0001$); obsessive-compulsive disorder twice as likely with restricting and binge/purge anorexia ($p < .01$); posttraumatic stress disorder twice as likely with binge-purge anorexia ($p < .05$); schizophrenia/other psychoses three times more likely with restricting anorexia ($p < .05$) and two times with binge-purge anorexia ($p < .05$). CONCLUSIONS: New findings emerged: extremely high comorbidity regardless of eating disorder, ubiquitous depression across all eating disorders, no difference in overall rate of anxiety disorders across eating disorders, greater posttraumatic stress disorder in binge-purge anorexia, more psychotic diagnoses in anorexia. Certain previous findings were confirmed: more obsessive-compulsive disorder in anorexia; more substance use in bulimia; and a replicated comorbidity rank-ordering for eating disorder patients: mood, anxiety, and substance use disorders, respectively.

Body dissatisfaction in women with eating disorders: relationship to early separation anxiety and insecure attachment.
Troisi A, Di Lorenzo G, Alcini S, Nanni RC, Di Pasquale C, Siracusano A
Psychosom Med. 2006 May-Jun;68(3):449-53.
OBJECTIVE: It has been suggested that an insecure style of attachment may be one of the factors implicated in the etiology of body dissatisfaction, which, in turn, is a risk factor for eating disorders. The present study analyzed the association among early separation anxiety, insecure attachment, and body dissatisfaction in a clinical sample of 96 women with anorexia nervosa (n = 31) or bulimia nervosa (n = 65). METHODS: Body dissatisfaction was measured using the Body Shape Questionnaire (BSQ), early separation anxiety was measured using the Separation Anxiety Symptom Inventory (SASI), and adult attachment style was measured using the Attachment Style Questionnaire (ASQ). RESULTS: In both anorectic and bulimic women, BSQ scores were strongly correlated with SASI and ASQ scores. In a hierarchical regression model controlling for the confounding effects of body mass index and depressive symptoms, early separation anxiety and preoccupied attachment emerged as significant predictors of high

levels of body dissatisfaction. CONCLUSIONS: Based on the cross-sectional findings of this study, insecure attachment appears to be a consistent correlate of negative body image evaluations in women with either anorexia nervosa or bulimia nervosa. If future prospective studies will confirm that an insecure style of attachment plays a role in promoting the development of body dissatisfaction, prevention and treatment of disordered eating pathology might be enhanced by focusing greater attention on attachment relationships.

A brief measure for assessing generalized anxiety disorder: the GAD-7.
Spitzer RL, Kroenke K, Williams JB, Lowe B
Arch Intern Med. 2006 May 22;166(10):1092-7.
BACKGROUND: Generalized anxiety disorder (GAD) is one of the most common mental disorders; however, there is no brief clinical measure for assessing GAD. The objective of this study was to develop a brief self-report scale to identify probable cases of GAD and evaluate its reliability and validity. METHODS: A criterion-standard study was performed in 15 primary care clinics in the United States from November 2004 through June 2005. Of a total of 2740 adult patients completing a study questionnaire, 965 patients had a telephone interview with a mental health professional within 1 week. For criterion and construct validity, GAD self-report scale diagnoses were compared with independent diagnoses made by mental health professionals; functional status measures; disability days; and health care use. RESULTS: A 7-item anxiety scale (GAD-7) had good reliability, as well as criterion, construct, factorial, and procedural validity. A cut point was identified that optimized sensitivity (89%) and specificity (82%). Increasing scores on the scale were strongly associated with multiple domains of functional impairment (all 6 Medical Outcomes Study Short-Form General Health Survey scales and disability days). Although GAD and depression symptoms frequently co-occurred, factor analysis confirmed them as distinct dimensions. Moreover, GAD and depression symptoms had differing but independent effects on functional impairment and disability. There was good agreement between self-report and interviewer-administered versions of the scale. CONCLUSION: The GAD-7 is a valid and efficient tool for screening for GAD and assessing its severity in clinical practice and research.

Editorial: partner dyspareunia (hispareunia).
Brubaker L
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Aug;17(4):311.

[Linguistic validation of the "Brief Index of Sexual Functioning for Women"]
Baudelot-Berrogain N, Roquejoffre S, Game X, Mallet R, Mouzin M, Bertrand N, Plante P, Sarramon JP, Rischmann P, Malavaud B
Prog Urol. 2006 Apr;16(2):174-83.
Application to the study of sexuality in a population of 93 French women. OBJECTIVES: This study was designed to linguistically validate the French version of the BISF-W (Brief Index of Sexual Functioning for Women) which provides a quantitative and qualitative assessment of female sexuality according to 7 dimensions. This version was then used to study the impact of recognized factors of sexual dysfunction on a control population. MATERIAL AND METHOD: The BISF-W a self-administered quality of life questionnaire developed by Rosen, was translated and linguistically validated. This questionnaire comprises 22 questions in 7 dimensions investigating all aspects of female sexuality: D1 (desire), D2 (arousal), D3 (frequency of sexual activity), D4 (receptiveness), 05 (pleasure, orgasm), D6 (relational satisfaction), D7 (problems affecting sexuality), Composite Score (CS) D1+D2+D3+D4+D5+D6+07. The French version was administered to a study population of 93 women: 49 derived from gynaecology or urology departments and 44 derived from the general population. We calculated and compared the scores of the various dimensions of the BISF-W according to factors able to modify sexuality, such as menopause, age or parity. RESULTS: The results of our study show an alteration of the various dimensions of sexuality in elderly patients (D2, D5, D6, CS; $p<0.05$) or postmenopausal patients (D2, D5, D6, CS, $p<0.05$) and in multiparous women. CONCLUSION: The French version of the BISF-W gives results in line with the literature and demonstrates changes of sexuality as a function of the above mentioned variables.

Sexual function following bowel vaginoplasty.
Hensle TW, Shabsigh A, Shabsigh R, Reiley EA, Meyer-Bahlburg HF
J Urol. 2006 Jun;175(6):2283-6.

Prediction of postoperative sexual function after nerve sparing radical retropubic prostatectomy.
Michl UH, Friedrich MG, Graefen M, Haese A, Heinzer H, Huland H
J Urol. 2006 Jul;176(1):227-31.
PURPOSE: Preservation of sexual function is one of the main objectives in radical prostatectomy. We assessed possible predictive factors for postoperative sexual function including preoperative International Index of Erectile Function score, age and extent of nerve sparing procedures for more precise preoperative counseling of patients undergoing radical prostatectomy. MATERIALS AND METHODS: Between January 2000 and December 2001 a total of 694 patients with clinically organ confined prostate cancer underwent nerve sparing radical prostatectomy. Preoperative erectile function was assessed with the International Index of Erectile Function score. After at least 12 months of followup patients were asked to answer the International Index of Erectile Function and Quality of Life Questionnaire C 30 via mail. RESULTS: A total of 411 patients responded to the questionnaire, 122 of whom underwent unilateral nerve sparing radical prostatectomy and 289 underwent bilateral nerve sparing radical prostatectomy. Data on preoperative and postoperative International Index of Erectile Function scores were available for 389 patients. Data on the International Index of Erectile Function and the postoperative Quality of Life Questionnaire C 30 were available for 382 patients. The median decrease in International Index of Erectile Function score was 7 points. Patients undergoing unilateral nerve sparing radical prostatectomy had a significantly stronger decrease in International Index of Erectile Function score compared to patients undergoing the bilateral nerve sparing procedure (12 vs 6 points). Preoperative International Index of Erectile Function score and extent of nerve sparing (unilateral vs bilateral nerve sparing radical prostatectomy) were significantly associated with better postoperative sexual function whereas age was not. Based on preoperative International Index of Erectile Function score, surgical technique and age, the likelihood of postoperative satisfactory erectile function can be defined preoperatively. CONCLUSIONS: We confirmed the impact of the extent of nerve sparing (unilateral vs bilateral nerve sparing radical prostatectomy) and highlighted the effect of preoperative erectile function as measured by the International Index of Erectile Function and age at surgery on postoperative sexual function. Our data can be used for counseling patients undergoing radical nerve sparing prostatectomy regarding recovery of erectile function.

Erectile dysfunction as a predictor of the metabolic syndrome in aging men: results from the massachusetts male aging study.
Kupelian V, Shabsigh R, Araujo AB, O'donnell AB, McKinlay JB
J Urol. 2006 Jul;176(1):222-6.
PURPOSE: The metabolic syndrome, characterized by central obesity, insulin dysregulation, abnormal lipids and borderline hypertension, is a precursor state for cardiovascular disease. We determined whether erectile dysfunction is predictive of the metabolic syndrome. MATERIALS AND METHODS: Data were obtained from the Massachusetts Male Aging Study, a population based prospective cohort observed at 3 points during approximately 15 years (T(1)-1987 to 1989, T(2)-1995 to 1997, T(3)-2002 to 2004). The metabolic syndrome was defined by using a modification of the Adult Treatment Panel III guidelines. The association between erectile dysfunction and the metabolic syndrome was assessed using relative risks and 95% confidence intervals estimated using Poisson regression models. RESULTS: Analysis was conducted of 928 men without the metabolic syndrome at T(1). There were 293 men with incident metabolic syndrome, of which 56 had erectile dysfunction at baseline. Body mass index and the presence of 1 or 2 conditions constituting the metabolic syndrome definition were the strongest predictors of the metabolic syndrome. The association of erectile dysfunction with the metabolic syndrome (unadjusted RR 1.35, 95% CI 1.01-1.81) was modified by body mass index, with a stronger effect of erectile dysfunction in men with body mass index less than 25 (adjusted RR 2.09, 95% CI 1.09-4.02), and no erectile dysfunction and metabolic syndrome association in men with body mass index 25 or greater (adjusted RR 1.06, 95% CI 0.76-1.50). CONCLUSIONS: Erectile dysfunction was predictive of the metabolic syndrome only in men with body mass index less than 25. This finding suggests that erectile dysfunction may provide a warning sign and an opportunity for early intervention in men otherwise considered at lower risk for the metabolic syndrome and subsequent cardiovascular disease.

A prospective study of risk factors for erectile dysfunction.

Bacon CG, Mittleman MA, Kawachi I, Giovannucci E, Glasser DB, Rimm EB
J Urol. 2006 Jul;176(1):217-21.
PURPOSE: We examined the impact of obesity, physical activity, alcohol use and smoking on the development of erectile dysfunction. MATERIALS AND METHODS: Subjects included 22,086 United States men 40 to 75 years old in the Health Professionals Followup Study cohort who were asked to rate their erectile function for multiple periods on a questionnaire mailed in 2000. Men who reported good or very good erectile function and no major chronic disease before 1986 were included in the analyses. RESULTS: Of men who were healthy and had good or very good erectile function before 1986, 17.7% reported incident erectile dysfunction during the 14-year followup. Obesity (multivariate relative risk 1.9, 95% CI 1.6-2.2 compared to men of ideal weight in 1986) and smoking (RR 1.5, 95% CI 1.3-1.7) in 1986 were associated with an increased risk of erectile dysfunction, while physical activity (RR 0.7, 95% CI 0.7-0.8 comparing highest to lowest quintile of physical activity) was associated with a decreased risk of erectile dysfunction. For men in whom prostate cancer developed during followup, smoking (RR 1.4, 95% CI 1.0-1.9) was the only lifestyle factor associated with erectile dysfunction. CONCLUSIONS: Reducing the risk of erectile dysfunction may be a useful and to this point unexploited motivation for men to engage in health promoting behaviors. We found that obesity and smoking were positively associated, and physical activity was inversely associated with the risk of erectile dysfunction developing.

10 – MISCELLANEOUS 2006 05

Easyloop knot: a simple and safe extracorporeal knot.
Pattas M, Theodorou D, Lagoudianakis E, Filis K, Menenakos E, Leandros E
Am J Surg. 2006 Jun;191(6):821-2.
Thorough knowledge of laparoscopic suturing is of great importance to the laparoscopic surgeon, especially during the performance of advanced laparoscopic procedures. Intracorporeal and extracorporeal knot tying enhances the technical capabilities of the laparoscopic access, thus extending the spectrum of laparoscopic procedures to that of open surgery. We describe herein a new extracorporeal knot designed with an emphasis on simplicity and safety.

Ionic solutions and possibilities of prevention of recurrent cystitis
Benoit JM, Berges JL, Falcou M, Jeanjean P, Jourfier C
Prog Urol. 2006 Apr;16(2):163-7.
OBJECTIVE: In view of the importance of the phenomenon of adhesion of bacteria to urothelial cells in the pathogenesis of urinary tract infections, the authors investigated the possibility of decreasing this adhesion by means of a complex ionic solution: La Preste mineral water SUBJECTS AND METHOD: The in vitro adhesion of Escherichia coli P-fimbriae (Gal-Gal pili) to urothelial cells in women with recurrent cystitis was compared in neutral medium and in mineral water and the interaction of this same micro-organism with microparticles coated with Gal-Gal receptors was also studied in the same media. In vivo, urothelial cells of 13 women with a normal urological assessment, presenting recurrent cystitis and a high adhesion capacity, were tested three times a day in relation to the same micro-organism on the first and last day of their course of mineral water therapy RESULTS: In vitro, pretreatment of urothelial cells by mineral water induced decreased adhesion (p=0.001), while pretreatment of bacteria with the same mineral water had no effect. In vivo, adhesion was significantly (p=0.021) decreased 2 to 3 hours after ingestion of mineral water and a significant global reduction of adhesion (p=0.016) was observed between the first and last day of mineral water therapy. CONCLUSIONS: These data show a reduction of adhesion (type P) between Escherichia coli and urothelial cells in the presence of La Preste mineral water, due to an action on urothelial cells. These results indicate the probable role of sulphur and silica in this process, while modulation of adhesion by ions has only been demonstrated to date for calcium and magnesium.

The probiotic approach: an alternative treatment option in urology.
Clayman R
J Urol. 2006 Jun;175(6):2136.

Female genital mutilation and obstetric outcome.

Eke N, Nkanginieme KE
Lancet. 2006 Jun 3;367(9525):1799-800.

Probiotics and inflammatory bowel diseases.
Bai AP, Ouyang Q
Postgrad Med J. 2006 Jun;82(968):376-82.
Enteric microflora profiles vary considerably between active inflammatory bowel diseases (IBD) and healthy conditions. Intestinal microflora may partake in the pathogenesis of IBD by one or some ways: specific pathogenic infection induces abnormal intestinal mucosal inflammation; aberrant microflora components trigger the onset of IBD; abnormal host immune response loses normal immune tolerance to luminal components; luminal antigens permeate through the defective mucosal barrier into mucosal lamina propria and induce abnormal inflammatory response. Preliminary studies suggest that administration of probiotics may be benefit for experimental colitis and clinical trials for IBD. Researches have been studying the function of probiotics. Introduction of probiotics can balance the aberrant enteric microflora in IBD patients, and reinforce the various lines of intestinal defence by inhibiting microbial pathogens growth, increasing intestinal epithelial tight junction and permeability, modulating immune response of intestinal epithelia and mucosal immune cells, secreting antimicrobial products, decomposing luminal pathogenic antigens.

Sphincterolysis: A Novel Approach towards Chronic Anal Fissure.
Gupta PJ
Eur Surg Res. 2006 May 11;38(2):122-126.
Background and Aims:The surgical approach in chronic anal fissure is often found associated with disturbed anal continence as well as recurrence. This report describes the author's approach of 'sphincterolysis' or fragmentation of the fibers of the internal sphincter on the left lateral anal wall. Patients and Methods:132 patients with chronic anal fissures were treated with this technique. Pre- and postoperative anal manometry was recorded. The postoperative course and early and 1-year follow-up results were recorded. Results: Early complications included ecchymosis, hematoma, and pain. Fissure healing and relief of symptoms observed in 97% of patients. A transient, variable degree of incontinence occurred in 23 patients and persistent incontinence to flatus and soiling in 5. Conclusion: Internal anal sphincterolysis is a safe, effective procedure for the treatment of chronic anal fissure. Copyright (c) 2006 S. Karger AG, Basel.

Colonic irrigations: a review of the historical controversy and the potential for adverse effects.
Richards DG, McMillin DL, Mein EA, Nelson CD
J Altern Complement Med. 2006 May;12(4):389-93.
Colonic irrigations enjoy widespread popularity among alternative medicine practitioners, although they are viewed with considerable skepticism by the conventional medical community. Although proponents make claims of substantial health benefits, skeptics cite the lack of evidence for health benefits and emphasize the potential for adverse effects. Yet historically, there are clinical reports of effectiveness and virtually no research refuting these reports. Instead there was a campaign against exaggerated claims by nonmedical practitioners that resulted in a movement away from this form of therapy without any scientific study of efficacy. Given the current popularity of colonic irrigations, it is important that such research be performed, which will require a quantitative estimate of the potential for adverse effects. Although there is little specific literature on colonic irrigations, a review of the literature on related procedures such as enemas and sigmoidoscopies suggests that the risk of serious adverse effects is very low when the irrigations are performed by trained personnel using appropriate equipment.

Rectal cancer: From outcomes of care to process of care.
Ignjatovic D, Bergamaschi R
Scand J Gastroenterol. 2006 Jun;41(6):636-9.
This paper represents a current opinion on the impact surgeons may have on the variability of the quality of care of rectal cancer surgery. No systematic review of the evidence available in the literature is provided. The objective is to present a concise insight on selected outcomes of care studies, to review the limitations of such studies and to discuss the value of process of care studies. Outcomes of care studies measure what happens to patients, and process of care studies measure what is done to patients. Three variables are

reviewed: training, volume and individual skill. It is concluded that the quality of the selected outcomes of care studies is not sufficient to draw definitive conclusions on whether surgeons are a variable. Further efforts should prompt process of care studies on rectal cancer surgery. This implies that outcomes should be measured, processes of care modified and outcomes measured again. This cycle should be continuously repeated in order to achieve the best quality of care.

Long-term results of "chemical sphincterotomy" for chronic anal fissure: a prospective study.
Lysy J, Israeli E, Levy S, Rozentzweig G, Strauss-Liviatan N, Goldin E
Dis Colon Rectum. 2006 Jun;49(6):858-64.
INTRODUCTION: Pharmacologic anal sphincter relaxants promote fissure healing; however, their effect is transient and the risk of late recurrence remains uncertain. METHODS: From August 1997 to August 2002, patients with chronic anal fissure attending our outpatient clinic were treated with a protocol that included: topical isosorbide dinitrate, 2.5 mg, or nifedipine, 0.2 percent t.i.d., or the combination of both. Botulinum toxin 20 units was injected to the internal anal sphincter to those who failed. All the patients were contacted and interviewed during November to December 2002. RESULTS: Follow-up was a median of 47.43 +/- 13 (range, 4.7-60) months. A total of 455 patients completed the study; 323 patients (71 percent) healed at follow-up ending: 170 of the healed patients had one or more recurrences that responded to further treatment (37.4 percent), whereas 153 patients (33.6 percent) healed and had no recurrences. One hundred thirty-two patients (29 percent) did not heal and were referred to lateral sphincterotomy. Long intervals between symptoms appearance and treatment initiation decreased healing and increased recurrence rates (P = 0.03 and 0.01 respectively). CONCLUSIONS: Topical treatment is effective for patients with chronic anal fissure, at short-term and long-term periods. Because for many patients it is not a definitive treatment, it can be offered to those who are ready to receive repeated treatments. Longer intervals between symptom appearance and treatment initiation negatively affects fissure healing and recurrence rate.

Rectal Cancer in the Young Patient.
Endreseth BH, Romundstad P, Myrvold HE, Hestvik UE, Bjerkeset T, Wibe A
Dis Colon Rectum. 2006 Jun 2;.
PURPOSE: The purpose of this national study was to evaluate the results of treatment for young rectal cancer patients. METHODS: This prospective study from the Norwegian Rectal Cancer Project includes all 2,283 patients younger than aged 70 years with adenocarcinoma of the rectum from November 1993 to December 1999. Patients younger than aged 40 years (n = 45), 40 to 44 years (n = 87), 45 to 49 years (n = 153), and 50 to 69 years (n = 1998) were compared for patient and tumor characteristics and five-year overall survival. Patients treated for cure (n = 1,354) were evaluated for local recurrence, distant metastasis, and disease-free survival. RESULTS: Patients younger than aged 40 years had significantly higher frequencies of poorly differentiated tumors (27 vs. 12-16 percent; P = 0.014), N2-stage (37 vs. 13-18 percent; P = 0.001), and distant metastases (38 vs. 19-24 percent; P = 0.019) compared with older patients. Among those treated for cure, 56 percent of the patients younger than aged 40 years developed distant metastases compared with 20 to 26 percent of the older patients (P = 0.003). Overall five-year survival was 54 percent for patients younger than aged 40years compared with 71 to 88 percent for the older patients (P = 0.029). Age younger than 40 years was a significant independent prognostic factor and increased the risk for metastasis and death. CONCLUSIONS: Patients younger than aged 40 years had a more advanced stage at the time of diagnosis and poor prognosis compared with older patients. Young patients treated for cure more often developed distant metastases and had inferior survival.

Operating Behind Denonvilliers' Fascia for Reliable Preservation of Urogenital Autonomic Nerves in Total Mesorectal Excision: A Histologic Study Using Cadaveric Specimens, Including a Surgical Experiment Using Fresh Cadaveric Models.
Kinugasa Y, Murakami G, Uchimoto K, Takenaka A, Yajima T, Sugihara K
Dis Colon Rectum. 2006 May 31;.
PURPOSE: Little is known about which urogenital nerves are liable to be injured along surgical planes in front of or behind Denonvilliers' fascia. METHODS AND RESULTS: Using semiserial histology for five fixed male pelves, we demonstrated that: 1) left/right communicating branches of bilateral pelvic plexuses run immediately in front of Denonvilliers' fascia; and 2) a lateral continuation of Denonvilliers' fascia separates

the urogenital neurovascular bundle from the mesorectum. Notably, the mesorectum contains no or few extramural ganglion cells. At the level of the seminal vesicles, incision in front of Denonvilliers' fascia seems likely to injure superior parts of the pelvic plexus and the left/right communication. Moreover, at the prostate level, this incision misleads the surgical plane into the neurovascular bundle. Fresh cadaveric dissections of five unfixed male pelves confirmed that the surgical plane in front of Denonvilliers' fascia continues to a fascial space for the pelvic plexus containing ganglion cell clusters lateral and/or inferior to the seminal vesicles. CONCLUSIONS: To preserve all autonomic nerves for urogenital function, optimal total mesorectal excision for rectal cancer requires dissection behind Denonvilliers' fascia.

Therapeutic action of ghrelin in a mouse model of colitis.
Gonzalez-Rey E, Chorny A, Delgado M
Gastroenterology. 2006 May;130(6):1707-20.
BACKGROUND & AIMS: Ghrelin is a novel growth hormone-releasing peptide with potential endogenous anti-inflammatory activities ameliorating some pathologic inflammatory conditions. Crohn's disease is a chronic debilitating disease characterized by severe T helper cell (Th)1-driven inflammation of the colon. The aim of this study was to investigate the therapeutic effect of ghrelin in a murine model of colitis. METHODS: We examined the anti-inflammatory action of ghrelin in the colitis induced by intracolonic administration of trinitrobenzene sulfonic acid. Diverse clinical signs of the disease were evaluated, including weight loss, diarrhea, colitis, and histopathology. We also investigated the mechanisms involved in the potential therapeutic effect of ghrelin, such as inflammatory cytokines and chemokines, Th1-type response, and regulatory factors. RESULTS: Ghrelin ameliorated significantly the clinical and histopathologic severity of the trinitrobenzene sulfonic acid-induced colitis; abrogating body weight loss, diarrhea, and inflammation; and increasing survival. The therapeutic effect was associated with down-regulation of both inflammatory and Th1-driven autoimmune response through the regulation of a wide spectrum of inflammatory mediators. In addition, a partial involvement of interluekin-10/transforming growth factor-beta1-secreting regulatory T cells in this therapeutic effect was demonstrated. Importantly, the ghrelin treatment was therapeutically effective in established colitis and avoided the recurrence of the disease. CONCLUSIONS: Our data demonstrate novel anti-inflammatory actions for ghrelin in the gastrointestinal tract, ie, the capacity to deactivate the intestinal inflammatory response and to restore mucosal immune tolerance at multiple levels. Consequently, ghrelin administration represents a novel possible therapeutic approach for the treatment of Crohn's disease and other Th1-mediated inflammatory diseases, such as rheumatoid arthritis and multiple sclerosis.