FORUM 2005 08

Basic Concepts of Statistical Analysis for Surgical Research.

Cassidy LD

J Surg Res 2005 Sep 1;.

Appropriate statistical analyses are an integral part of surgical research. The purpose of this work is to assist surgeons and clinicians with the interpretation of statistics by providing a general understanding of the basic concepts that lead to choosing an appropriate statistical test for common study designs. It is extremely important to understand the nature of the data before embarking on a statistical analysis. A researcher must design an appropriate study around the research hypothesis. Initially, data should be inspected using frequency distributions and graphical techniques. If the data are continuous, the normality of the distribution must be assessed. In addition, the data must be defined as independent or dependent. For normally distributed and independent samples, a two-sample t test is appropriate. A paired t test should be used for dependent data. The nonparametric counterpart to the t test is the Mann-Whitney U and the paired counterpart is the Wilcoxon signed rank. For binary data, contingency table methods such as a chi(2) test apply unless the expected value is < 5; then, use the Fisher's exact test. The McNemar test applies to paired binary data. Correlation coefficients assess the association between two continuous distributions. Linear regression assesses trend. Multiple regression analysis is appropriate for multivariate analyses with a continuous outcome variable. Logistic regression methods would apply for binary outcomes. The quality of the analysis and subsequent results of any research project depend on an appropriate study design, data collection, and analysis to make meaningful conclusions.

1 – THE PELVIC FLOOR 2005 08

30th Annual Meeting of the International Urogynecological Association, 9-12 August 2005, Copenhagen, Denmark. Abstracts.

Int Urogynecol J Pelvic Floor Dysfunct 2005;16 Suppl 2:S35-S130.

2 – FUNCTIONAL ANATOMY 2005 08

Electrospinning of collagen and elastin for tissue engineering applications.

Buttafoco L, Kolkman NG, Engbers-Buijtenhuijs P, Poot AA, Dijkstra PJ, Vermes I, Feijen J

Biomaterials 2005 Aug 17;.

Meshes of collagen and/or elastin were successfully prepared by means of electrospinning from aqueous solutions. Flow rate, applied electric field, collecting distance and composition of the starting solutions determined the morphology of the obtained fibres. Addition of PEO (M(w)=8x10(6)) and NaCl was always necessary to spin continuous and homogeneous fibres. Spinning a mixture of collagen and elastin resulted in fibres in which the single components could not be distinguished by SEM. Increasing the elastin content determined an increase in fibres diameters from 220 to 600nm. The voltage necessary for a continuous production of fibres was dependent on the composition of the starting solution, but always between 10 and 25kV. Under these conditions, non-woven meshes could be formed and a partial orientation of the fibres constituting the mesh was obtained by using a rotating tubular mandrel as collector. Collagen/elastin (1:1) meshes were stabilized by crosslinking with N-(3-dimethylaminopropyl)-N'-ethylcarbodiimide hydrochloride (EDC) and N-hydroxysuccinimide (NHS). This treatment afforded materials with a high thermal stability (T(d)=79 degrees C) without altering their original morphology. Upon crosslinking PEO and NaCl were fully leached out. Smooth muscle cells grew as a confluent layer on top of the crosslinked meshes after 14d of culture.

[The urology in the anatomical plates of Andreas Vesalius (1514-1564)]

Androutsos G

Prog Urol 2005 Jun;15(3):544-50.

Perspicacious and methodical as much as genius, Vesalius was the greatest anatomist of all time. He created the anatomical nomenclature of organs used even today. He elaborated more than 300 remarkable anatomical illustrations, a part of which is dedicated to the male urogenital tract, providing in this way precious information about the knowledge on urology of his time.

Anatomical basis for nerve-sparing radical hysterectomy: immunohistochemical study of the pelvic autonomic nerves.

Maas CP, Kenter GG, Trimbos JB, Deruiter MC

Acta Obstet Gynecol Scand 2005 Sep;84(9):868-74.

BACKGROUND: Autonomic nerve damage plays a crucial role in the etiology of bladder dysfunction, sexual dysfunction, and colorectal motility disorders that occur after radical hysterectomy. We investigated the

extent and nature of nerve damage in conventional and nerve-sparing radical hysterectomy. METHODS: Macroscopical disruption of nerves was assessed through anatomical dissection after conventional and nerve-sparing surgery on five fixed and one fresh cadaver. Immunohistochemical analysis of surgical margins was performed to confirm nerve damage using a general nerve marker (S100) and a sympathetic nerve marker (anti-tyrosine hydroxylase) within sections of biopsies. RESULTS: Macroscopical dissection showed that in the conventional procedure, transsection of the uterosacral ligaments resulted in disruption of the major part of the hypogastric nerve. After nerve-sparing surgery, only the medial branches of the hypogastric nerve appeared disrupted. Division of the cardinal ligaments in the conventional procedure identified the inferior hypogastric plexus running into the most posterior border of the surgical margin. The anterior part of the plexus was disrupted. Dissection of the nerves after the nerve-sparing procedure showed that this anterior part of the plexus was not involved in the surgical dissection line. Dissection of the vesicouterine ligament disrupted only small nerves on the medial border of the inferior hypogastric plexus in both techniques. Microscopical evaluation of the surgical margins confirmed the macroscopical findings. CONCLUSION: Conventional radical hysterectomy results in disruption of a substantial part of the pelvic autonomic nerves. The nerve-sparing modification leads to macroscopic reduction in nerve disruption which is substantiated by microscopical evaluation of surgical margins.

Control of gastrointestinal motility by the "gut brain" - the enteric nervous system.
Schemann M
J Pediatr Gastroenterol Nutr 2005 Sep;41 Suppl 1:S4-6.
The enteric nervous system (ENS) as the "brain of the gut" is pivotal for normal muscle activity in the gut. Neuronal circuits within the ENS are designed to control gut motility independent of central inputs. To fulfill this task the ENS contains all necessary elements for coding mechanical and chemical stimuli, interneuronal communication and efferent output to the muscle. This review provides a summary of the ENS circuits that control muscle activity, the main transmitters and neuromodulators involved and the functional implications for the normal and diseased gut.

Stimulation of defecation: effects of coffee use and nicotine on rectal tone and visceral sensitivity.
Sloots CE, Felt-Bersma RJ, West RL, Kuipers EJ
Scand J Gastroenterol 2005 Jul;40(7):808-13.
OBJECTIVE: Coffee and cigarette use is believed to induce bowel movements, although the literature is controversial and precise measurements of rectal tone and sensitivity with a barostat have never been performed. The aim of this study was to assess the effects of coffee and nicotine on rectal tone, compliance and sensitivity. MATERIALS AND METHODS: Sixteen healthy volunteers were recruited for the coffee (n = 8) and nicotine (n = 8) experiments. The experiments were randomly performed in a placebo-controlled crossover design on separate days. In the coffee experiment, 280 ml strong coffee or warm water was drunk and in the nicotine experiment, nicotine (2 mg) or placebo was given sublingually. A rectal barostat procedure was carried out. A flaccid bag, mounted on a catheter, was inserted in the rectum. Continuous pressure distension was exerted to register basal visceral sensitivity and compliance. After rectal adaptation, the stimulus was given. Rectal tone was measured for 1 h, after which continuous pressure distension was repeated. RESULTS: Rectal tone increased by 45% 30 min after coffee intake ($p = 0.031$) and by 30% after water intake ($p = 0.032$), but the effects of coffee and water were not significantly different. Rectal tone did not change significantly after administration of nicotine (7%) or placebo (10%). There was no difference in compliance and visceral sensitivity between coffee and water or nicotine and placebo. CONCLUSIONS: Both coffee and warm water have an effect on defecation by increasing rectal tone, but nicotine (2 mg) did not affect rectal tone. Coffee and nicotine did not influence sensitivity or compliance.

The identification of specialized pacemaking cells in the anal sphincters.
Shafik A, El Sibai O, Ahmed I
Int J Colorectal Dis 2005 Aug 9;:1-5.
BACKGROUND AND AIMS: Interstitial cells of Cajal (ICC) are claimed to generate the electrical activity in the colon and stomach. As the external (EAS) and internal (IAS) anal sphincters exhibit resting electrical activity, we hypothesized the presence of ICC in these sphincters. This hypothesis was investigated in the current study. PATIENTS/METHODS: Specimens from the EAS and IAS were taken from normal areas of the anorectum which had been surgically excised by abdominoperineal operation for rectal cancer of 28 patients (16 men, 12 women, mean age 42.2+/-4.8 years). The specimens were subjected to c-kit immunohistochemistry. Controls for the specificity of the antisera consisted of tissue incubation with normal rabbit serum substituted for the primary antiserum. RESULTS/FINDINGS: Fusiform, c-kit positive, ICC-like cells were detected in the anal sphincters; they had dendritic processes. They were clearly distinguishable from the non-branching, c-kit negative smooth and striated muscle cells of the anal sphincters. The specimens contained also c-kit positive mast cells, but they had a rounded body with no dendritic processes.

Immunoreactivity was absent in negative controls in which the primary antibody was omitted. INTERPRETATION/CONCLUSION: We have identified, for the first time, cells in EAS and IAS with morphological and immunological phenotypes similar to ICCs of the gut. These cells appear to be responsible for initiating the slow waves recorded from the anal sphincters and for controlling their activity. A deficiency or absence of these cells may affect the anal motile activity. Studies are needed to explore the role of these cells in anal motility disorders.

Extracorporeal Magnetic Stimulation of the Pelvic Floor: Impact on Anorectal Function and Physiology. A Pilot Study.
Thornton MJ, Kennedy ML, Lubowski DZ
Dis Colon Rectum 2005 Aug 18;.
PURPOSE: This study was designed to investigate the effect of extracorporeal magnetic stimulation on anorectal function and physiology. METHODS: A pilot study comparing the physiology of ten incontinent (9 females) and five continent (4 females) patients with and without perineal magnetic stimulation (10 Hz and 50 Hz) was performed. The ten incontinent patients were treated with two sessions weekly for five weeks of perineal magnetic stimulation. At treatment completion, precontinent and postcontinent scores and resting and squeeze anal pressure were compared. Patients also reported symptom improvement and satisfaction on a linear analog scale. RESULTS: The patients' mean age was 57 years. Sitting resting and squeeze anal pressures were significantly greater than lying pressures (P = 0.007, 0.047). Both 10-Hz and 50-Hz stimulation effected a significant increase in anal pressures compared with the baseline resting pressure (P = 0.005). The baseline squeeze pressures were significantly higher than the stimulated pressures compared with 50-Hz pressures (P = 0.022). After six weeks of treatment, there was a statistically significant increase in resting and squeeze anal pressures and a significant decrease in continence scores (P = 0.007, P = 0.008, P = 0.017). The mean percentage subjective improvement was 16 percent, and the mean patient satisfaction score was 3.3, positively correlating with an improvement in the continence score. CONCLUSIONS: Extracorporeal magnetic stimulation results in a significant increase in anal resting pressure irrespective of pretreatment continence. Although the subjective improvement in continence after treatment is small, there is a significant improvement in both resting pressures and patient continence scores.

Epithelial cells and their neighbors. II. New perspectives on efferent signaling between brain, neuroendocrine cells, and gut epithelial cells.
Flemstrom G, Sjoblom M
Am J Physiol Gastrointest Liver Physiol 2005 Sep;289(3):G377-80.
Surface sensory enteroendocrine cells are established mucosal taste cells that monitor luminal contents and provide an important link in transfer of information from gut epithelium to the central nervous system. Recent studies now show that these cells can also mediate efferent signaling from the brain to the gut. Centrally elicited stimulation of vagal and sympathetic pathways induces release of melatonin, which acts at MT2 receptors to increase mucosal electrolyte secretion. Psychological factors as well mucosal endocrine cell hyperplasia are implicated in functional intestinal disorders. Central nervous influence on the release of transmitters from gut endocrine cells offers an exciting area of future gastrointestinal research with a clinical relevance.

3 – DIAGNOSTICS 2005 08
Predictive value of prolapse symptoms: a large database study.
Tan JS, Lukacz ES, Menefee SA, Powell CR, Nager CW
Int Urogynecol J Pelvic Floor Dysfunct 2005 May-Jun;16(3):203-9; discussion 209. Epub 2004 Oct 23.
We sought to describe the relationship between patient symptoms and pelvic organ prolapse (POP) and report the sensitivity, specificity, and positive and negative predictive value of these POP symptoms. Two urologists and four urogynecologists developed a standardized pelvic floor questionnaire based on face validation for use at three female pelvic floor disorder clinics. Specific questions related to prolapse included questions on urinary splinting, digital assistance for defecation, and a bulge per vagina. Prolapse was assessed with the standardized Pelvic Organ Prolapse Quantitative (POP-Q) terminology. The analysis included 1912 women. Urinary splinting was uncommon (< 10%) when Ba < 0, but ranged between 23 and 36% for stage III and IV Ba prolapse. Digital assistance was equally common in stage II Bp prolapse (21-38%) and stage III-IV Bp prolapse (26-29%). Only 6-11% of women with stage 0 or I POP reported symptoms of bulge, but with stage II it increased to 77%. Urinary splinting is 97% specific for anterior prolapse. The report of a bulge has an 81% positive predictive value and a 76% negative predictive value. Very few patients without anterior prolapse will report urinary splinting. Digital assistance for fecal evacuation is no more common with massive posterior prolapse than with moderate posterior prolapse. Patient report of a bulge is a valuable screening tool for POP and should prompt a careful exam.

The ability of history and a negative cough stress test to detect occult stress incontinence in patients undergoing surgical repair of advanced pelvic organ prolapse.
Kleeman S, Vassallo B, Segal J, Hungler M, Karram M
Int Urogynecol J Pelvic Floor Dysfunct 2005 Aug 11;.

Reevaluating occult incontinence.
Haessler AL, Lin LL, Ho MH, Betson LH, Bhatia NN
Curr Opin Obstet Gynecol 2005 Oct;17(5):535-40.
PURPOSE OF REVIEW: Occult incontinence is a controversial subject without significant exposure in the literature. Conventionally, it has been assumed to be a marker for increased risk of postoperative stress urinary incontinence (POSUI) after repair of pelvic organ prolapse. The controversy surrounds the performance of prophylactic incontinence procedures based on this assumption. Until 2004 no article in the English language had been published demonstrating an association between occult incontinence and increased risk of stress urinary incontinence after repair of severe pelvic organ prolapse in previously continent women. We will explore the evidence regarding occult incontinence, review the data on intervention trials, and address questions that remain. RECENT FINDINGS: The limited evidence suggests 11-22% of continent patients with severe pelvic organ prolapse will develop POSUI. New evidence suggests that patients with occult incontinence are at substantially more risk. Since anti-incontinence procedures in patients with occult incontinence reduces the incidence of POSUI (to 0-15%), there appears to be some benefit from screening and intervention. Most studies on the subject are small and limited by their design. Results differ regarding whether a negative stress test can be used to rule out the risk of POSUI. SUMMARY: Minimal existing evidence in the English language suggests that patients with occult incontinence are at increased risk of POSUI. Outcomes in occult incontinence patients undergoing repair of pelvic organ prolapse need systematic study. Until there is adequate solid evidence on the predictive values of our screening test, we cannot counsel patients regarding our ability to prevent POSUI or protect them from unnecessary procedures.

Abdominal Bloating.
Azpiroz F, Malagelada JR
Gastroenterology 2005 Sep;129(3):1060-1078.
Abdominal bloating is a common and significant clinical problem that remains to be scientifically addressed. Bloating is one of the most bothersome complaints in patients with various functional gut disorders. However, in the current standard classification, abdominal bloating is merely regarded as a secondary descriptor, which masks its real clinical effect. Four factors are involved in the pathophysiology of bloating: a subjective sensation of abdominal bloating, objective abdominal distention, volume of intra-abdominal contents, and muscular activity of the abdominal wall. The primer to elicit subjective bloating may be any of the other 3 factors, or the sensation may be related to distorted perception. All of these mechanisms may play an independent role or may be interrelated. Gas transit studies have evidenced that patients with bloating have impaired reflex control of gut handling of contents. Segmental pooling, either of gas or of solid/liquid components, may induce a bloating sensation, particularly in patients with altered gut perception. Furthermore, altered viscerosomatic reflexes may contribute to abdominal wall protrusion and objective distention, even without major intra-abdominal volume increment. Bloating probably is a heterogeneous condition produced by a combination of pathophysiological mechanisms that differ among individual patients and that in most cases are subtle and undetectable by conventional methods. Further advances in the pathophysiology and clinical forms of bloating are warranted to develop mechanistic strategies rather than the current empiric treatment strategies for comprehensive and effective management of this problem.

Correlation between urethral sphincter activity and valsalva leak point pressure at different bladder distentions: revisiting the urethral pressure profile.
Almeida FG, Bruschini H, Srougi M
J Urol 2005 Oct;174(4 Pt 1):1312-6.
PURPOSE:: We determined the correlation between Valsalva leak point pressure (LPP) and the urethral pressure profile (UPP) in urodynamically selected patients with stress urinary incontinence (SUI) as well as the interference of bladder volume on this correlation. MATERIALS AND METHODS:: A total of 450 consecutive women with SUI were clinically evaluated and underwent urodynamic study. Inclusion criteria were urodynamically demonstrable SUI with normal bladder compliance, sensitivity and capacity. Severe pelvic prolapse, detrusor overactivity and a pattern suggestive of obstruction were excluded. Urodynamic study was performed using a 7Fr 4 channel membrane catheter. LPP was determined at mid bladder capacity and UPP was determined at 50 ml, between 200 and 250 ml, and at bladder capacity. RESULTS:: A total of 200 women fulfilled the selection criteria, of whom 30, 114 and 56 had a LPP of 60 or less,

between 60 and 120, and greater than 120 cm H2O, respectively. Except for age and the number of pads the 3 groups were well matched in clinical and bladder urodynamic parameters. A progressive correlation of LPP with maximum urethral closure pressure was found when UPP was performed at 50 ml (r = 0.305, p <0.0001), at 250 ml (r = 0.483, p <0.0001) and at maximum bladder filling (r = 0.561, p <0.0001). Urethral functional length did not show a correlation with LPP at a bladder distention of 50 ml (r = 0.117, p = 0.100) or 200 ml (r = 0.167, p = 0.019) but there was a minor correlation at bladder capacity (r = 0.234, p = 0.002). CONCLUSIONS:: There is a significant correlation between maximum urethral closure pressure and LPP. Patients with a LPP of 60 cm H2O or less have a shorter urethral functional length and lower sphincter activity. Patients with SUI have a more remarkable correlation between UPP and Valsalva LPP when UPP is determined after filling the bladder to more than 200 ml.

Extracolonic findings at CT colonography.
Sosna J, Kruskal JB, Bar-Ziv J, Copel L, Sella T
Abdom Imaging 2005 Aug 11;.
This review focuses on the detection of extracolonic findings at CT colonography (CTC). Since its introduction, it has been regarded as a promising alternative to conventional colonoscopy for the detection of colorectal polyps and cancers. Unlike conventional colonoscopy and barium enema, CTC allows evaluation not only of the colon but also visualization of the lung bases, the abdomen, and the pelvis. CTC is performed with thin sections (1-5 mm) and small intervals (0.5-2 mm), enabling superb image reconstruction. The ability to evaluate the extracolonic structures can present a clinical dilemma. On the one hand, CTC may incidentally demonstrate asymptomatic malignant diseases or other clinically important conditions, thus possibly reducing morbidity or mortality. On the other hand, CTC may reveal numerous findings of no clinical relevance; this could result in costly additional diagnostic examinations with an increase in morbidity and overall negative impact on patients' health. In this article, extracolonic findings at CTC will be reviewed and the potential benefits and disadvantages will be presented.

Effectiveness of walking exercise as a bowel preparation for colonoscopy: a randomized controlled trial.
Kim HS, Park DH, Kim JW, Jee MG, Baik SK, Kwon SO, Lee DK
Am J Gastroenterol 2005 Sep;100(9):1964-9.

What's the Value of Diagnostic Tools in Defecation Disorders?
Nurko S
J Pediatr Gastroenterol Nutr 2005 Sep;41 Suppl 1:S53-S55.

Psychosocial factors: impact on symptom severity and outcomes of pediatric functional gastrointestinal disorders.
Walker LS, Jones DS
J Pediatr Gastroenterol Nutr 2005 Sep;41 Suppl 1:S51-2. **TUTTI ART X ALVINO!!!!!!!!!**

Do the Rome Criteria Help the Doctor or the Patient?
Rowland M, Bourke B, Drumm B
J Pediatr Gastroenterol Nutr 2005 Sep;41 Suppl 1:S32-S33.

4 – PROLAPSES 2005 08
Pelvic Organ Prolapse.
Weber AM, Richter HE
Obstet Gynecol 2005 Sep;106(3):615-634.
Pelvic organ prolapse, including anterior and posterior vaginal prolapse, uterine prolapse, and enterocele, is a common group of clinical conditions affecting millions of American women. This article, designed for the practicing clinician, highlights the clinical importance of prolapse, its pathophysiology, and approaches to diagnosis and therapy. Prolapse encompasses a range of disorders, from asymptomatic altered vaginal anatomy to complete vaginal eversion associated with severe urinary, defecatory, and sexual dysfunction. The pathophysiology of prolapse is multifactorial and may operate under a "multiple-hit" process in which genetically susceptible women are exposed to life events that ultimately result in the development of clinically important prolapse. The evaluation of women with prolapse requires a comprehensive approach, with attention to function in all pelvic compartments based on a detailed patient history, physical examination, and limited testing. Although prolapse is associated with many symptoms, few are specific for prolapse; it is often challenging for the clinician to determine which symptoms are attributable to the prolapse itself and will therefore improve or resolve once the prolapse is treated. When treatment is warranted based on specific symptoms, prolapse management choices fall into 2 broad categories: nonsurgical, which

includes pelvic floor muscle training and pessary use; and surgical, which can be reconstructive (eg, sacral colpopexy) or obliterative (eg, colpocleisis). Concomitant symptoms require additional management. Virtually all women with prolapse can be treated and their symptoms improved, even if not completely resolved.

Survey of the characteristics and satisfaction degree of the patients using a pessary.
Bai SW, Yoon BS, Kwon JY, Shin JS, Kim SK, Park KH
Int Urogynecol J Pelvic Floor Dysfunct 2005 May-Jun;16(3):182-6; discussion 186. Epub 2004 Dec 1
The objective of this study was to evaluate characteristics, satisfaction degree, and problems of patients using a pessary for pelvic organ prolapse. A total of 104 patients who had been fitted with a pessary and available for follow-up for pelvic organ prolapse management were enrolled. The patients answered questions on general characteristics, indications for pessary use, complications from pessary use, satisfaction degree, and frequency of removal. The results indicated that 76 (73.0%) patients had at least more than one medical illness and 86 (82.7%) patients complained of lower urinary symptoms such as incontinence, urgency, frequency, or nocturia. Eighty-four (80.7%) patients used pessaries as they were not surgical candidates due to poor medical status or old age. After using a pessary, 76 (73.1%) patients had symptoms such as bleeding, erosion, or foul odor; 70.2% of the women answered that they were satisfied or more than satisfied and 19.1% of the patients removed their pessaries, of whom 80.0% were unable to continue use due to repeated expulsion of the pessary and uncomfortable fitting. These data suggest that the pessary tends to be used for high-risk patients due to medical problems or old age. Despite the high frequency of complications from pessary use, it was seen that the frequency of removing the pessary was low and the satisfaction degree was high. Most of the complications were not thought to be serious. To decrease the frequency of complications, the regular follow-up visit and proper management of pessary use were thought to be needed. Further studies are warranted on tailor-fitting the pessary by variable use and relieving the symptoms associated with the lower urinary tract.

Medical vs. Surgical Management of Thrombosed External Hemorrhoids.
Hall NR
Dis Colon Rectum 2005 Aug 3;.

Anorectal Physiology in Solitary Ulcer Syndrome: A Case-Matched Series.
Morio O, Meurette G, Desfourneaux V, D'Halluin PN, Bretagne JF, Siproudhis L
Dis Colon Rectum 2005 Aug 16;.
PURPOSE: Solitary ulcer syndrome is a rare condition characterized by inflammation and chronic ulcer of the rectal wall in patients suffering from outlet constipation. Despite similar surgical options (rectopexy, anterior resection), solitary ulcer syndrome may differ from overt rectal prolapse with regard to symptoms and pathogenesis. The present work analyzed differences between these conditions in a case-control physiology study. METHODS: From 1997 to 2002, 931 consecutive subjects were investigated in a single physiology unit for anorectal functional disorders. Standardized questionnaires, anorectal physiology, and evacuation proctography were included in a prospective database. Diagnosis of solitary ulcer syndrome was based on both symptoms and anatomic features in 25 subjects with no overt rectal prolapse (21 females and 4 males; mean age, 37.2 +/- 15.7 years) and no past history of anorectal surgery. They were compared with age-matched and gender-matched subjects: 25 with outlet constipation (also matched on degree of internal procidentia), 25 with overt rectal prolapse without any mucosal change, and 14 with overt rectal prolapse and mucosal changes. RESULTS: Subjects with solitary ulcer syndrome reported symptomatic levels (digitations, pain, incontinence) similar to those of patients with outlet constipation, but they had significantly more constipation and less incontinence than patients with overt rectal prolapse. Compared with each of the three control groups (dyschezia, rectal prolapse without mucosal change, and rectal prolapse with mucosal change), subjects with solitary ulcer syndrome more frequently had an increasing anal pressure at strain (15 vs. 5, 3, and 1, respectively ; $P < 0.01$) and a paradoxical puborectalis contraction (15 vs. 9, 1, and 1, respectively; $P < 0.05$). With respect to evacuating proctography, complete rectal emptying was achieved less frequently in this group (5 vs. 12, 23, and 10, respectively; $P < 0.05$). Compared with patients with overt rectal prolapse, mean resting and squeezing anal pressures were significantly higher in both groups of subjects with solitary ulcer syndrome and with outlet constipation. Prevalence and levels of anatomic disorders (perineal descent, rectocele) did not differ among the four groups except for rectal prolapse grade and prevalence of enterocele (higher in overt rectal prolapse group). Interestingly, and despite matched controls for degree of intussusception, individuals with solitary ulcer syndrome had circular internal procidentia more often compared with those suffering from outlet constipation without mucosal lesions (15 vs. 8, $P < 0.05$). CONCLUSION: This case-controlled study quantifies functional anal disorders in patients suffering from solitary ulcer syndrome. Despite no proven etiologic factor, sphincter-obstructed defecation and circular internal procidentia both may play an important part in the pathogenesis and an exclusive surgical approach may not be appropriate in this context.

Closed rectopexy with transanal resection for complete rectal prolapse in adults.
Lasheen AE, Khalifa S, El Askry SM, Elzeftawy AA
Gastrointest Surg 2005 Sep-Oct;9(7):980-4.
Many techniques have been described for repair of complete rectal prolapse in adults. The results of abdominal approaches are superior to those of perineal approaches, but they carry the risks of major abdominal surgery. Twenty-seven patients (15 females and 12 males) were included in this study, with a mean age of 46 years. Nine of these patients had fecal incontinence. The operation can be performed under spinal or general anesthesia. The operation involves transanal resection of the redundant part of the rectum followed by rectopexy through small postanal incisions. The mean follow-up period was 24 months. One patient developed infection in one stab incision 6 months after the operation. Two patients had hematoma formation, which were managed conservatively. During the 2-year period of follow-up, no recurrence was observed in any of our patients. Fecal incontinence improved in the nine incontinent patients. The technique is simple, easy, and less invasive with good results and less morbidity and is not associated with serious complications.

5 – RETENTIONS 2005 08

Dysfunctional elimination symptoms in childhood and adulthood.
Bower WF, Yip SK, Yeung CK
J Urol 2005 Oct;174(4 Pt 2):1623-8.
PURPOSE:: The dysfunctional elimination syndrome (DES) is rare in adulthood. We evaluate the natural history of DES to identify aspects of the disorder that may be carried into adulthood. MATERIALS AND METHODS:: A 2-part questionnaire was devised and self-administered to 191 consecutive women attending a urogynecological clinic (UG) and to 251 normal women. The first section asked for recall of childhood symptoms known to be associated with DES, while the lat-ter section explored current bladder and bowel problems. Data sets from the normal cohort (55) reporting current bladder problems were excluded. Descriptive statistics, chi-square and Mann-Whitney-U tests were used to compare variables. RESULTS:: UG patients had significantly higher childhood DES scores than normal women. Overall 41.7% of UG patients could be labeled as having dysfunctional elimination as an adult. Symptoms reported significantly more often in childhood by UG patients than by control women were frequent urinary tract infection, vesicoureteral reflux, frequency, urge incontinence, slow and intermittent urine flow, small volume high urge voids, hospitalization for constipation, frequent fecal soiling and nocturnal enuresis. Higher DES scores correlated significantly with current adult urgency, urge leak, stress incontinence, incomplete emptying, post-void leak, hesitancy, nocturia and nocturnal enuresis. Constipation and fecal incontinence in adulthood also showed a significant association with high DES scores. Logistic regression revealed childhood urgency to be associated with adult DES. CONCLUSIONS:: Childhood lower urinary tract dysfunction may have a negative impact on bladder and bowel function later life.

Pelvic floor dysfunction after Burch colposuspension--a comprehensive study. Part I.
Kjolhede P, Wahlstrom J, Wingren G
Acta Obstet Gynecol Scand 2005 Sep;84(9):894-901.
OBJECTIVE: To evaluate the occurrence of voiding dysfunction and symptoms of genital prolapse at long-term follow-up after Burch colposuspension (Bc) in relation to the occurrence of the symptoms in an age-matched normal population. MATERIALS AND METHODS: A follow-up study of the 190 patients who underwent Bc in 1980-88 and 305 age-matched control women randomly selected from the general population. The participants answered a questionnaire in 1998 with detailed questions about the pelvic floor function. Univariate and multivariate analyses were performed. RESULTS: The prevalence and frequency of urinary incontinence were significantly higher in the patient group compared with those in the control group as were urge incontinence, difficulty to start voiding, time needed at the toilet for voiding, the need to return to the toilet for emptying the bladder, feeling of incomplete emptying of the bladder, and limitation of social life because of the leakage. The symptoms of genital prolapse were significantly more common in the patient group in spite of a significantly larger proportion of genital prolapse surgery in this group. Parity, high body mass index, heavy lifting work, chronic pulmonary diseases, hiatus hernias, and hysterectomy were significantly more common in the patient group than among the controls. CONCLUSIONS: At long-term follow-up, patients exhibit substantial symptoms of pelvic floor dysfunction (PFD) concerning voiding dysfunction and symptoms of genital prolapse compared with a normal population. This highlights the importance and need of treating pelvic floor disorders in a comprehensive way. Scientific works with comprehensive studies of PFD are needed.

Evaluation of the Paradoxical Sphincter Contraction by a Strain/Squeeze Index in Constipated

Patients.
Karlbom U, Eeg-Olofsson KE, Graf W, Pahlman L
Dis Colon Rectum 2005 Aug 1;.
PURPOSE: One finding in patients with constipation is the paradoxical puborectalis contraction, i.e. , activation of the sphincter muscles during straining instead of relaxation. The aims of this study were to evaluate the importance of needle placement in sphincter-electromyography and to evaluate a strain/squeeze index in constipated patients and control subjects. METHODS: We investigated consecutively 194 constipated patients and 16 control subjects with integrated electromyography during straining and squeezing and calculated a strain/squeeze index. The examination was performed in the puborectalis and in the external anal sphincter muscle through hook-electrodes. RESULTS: There was a strong correlation between indices in the puborectalis muscle and in the external anal sphincter muscle ($r = 0.70$-0.80, $P < 0.001$). Forty-seven patients (24 percent) had a mean index of greater than 50 compared with none in the control group ($P = 0.01$). Mean overall index in patients was 24 (range, 0-306) vs. 18 (range, 0-45) in controls ($P = 0.12$). Patients with an index greater than 50 had impaired rectal evacuation ($P < 0.001$), increased threshold for urge ($P < 0.05$), and tended to have fewer stools ($P = 0.06$). CONCLUSION: Quantification of paradoxical contraction in the puborectalis and external anal sphincter with a strain/squeeze index differentiates patients in whom paradoxical activity may be a cause of constipation. An index above 50 may be of pathologic significance. Correlations between activity in the puborectalis and external anal sphincter muscle were strong which suggests that investigation in one of them is sufficient.

Surgery and Constipation: When, How, Yes, or No?
Levitt MA, Pena A
J Pediatr Gastroenterol Nutr 2005 Sep;41 Suppl 1:S58-S60.

New Treatment Options in Childhood Constipation?
Benninga MA, Candy DC, Taminiau JA
J Pediatr Gastroenterol Nutr 2005 Sep;41 Suppl 1:S56-S57.

6 – INCONTINENCES 2005 08
The effect of pregnancy and mode of delivery on the prevalence of urinary and fecal incontinence.
McKinnie V, Swift SE, Wang W, Woodman P, O'Boyle A, Kahn M, Valley M, Bland D, Schaffer J
Am J Obstet Gynecol 2005 Aug;193(2):512-7; discussion 517-8.
OBJECTIVE: The purpose of this study was to determine the relative effects of pregnancy and mode of delivery on the prevalence of urinary and fecal incontinence. STUDY DESIGN: This was a prospective, observational multicenter study of women presenting to 6 gynecology clinics. Demographic data collected included: height, weight, gravidity, parity, and number of vaginal deliveries. Patients were diagnosed with incontinence by questionnaire. Standard univariate logistic regression analyses' were performed to determine the contribution of pregnancy, mode of delivery, and BMI on the prevalence of urinary and fecal incontinence. RESULTS: One thousand and four women were enrolled over an 18-month period. Two hundred and thirty-seven and 128 subjects had urinary and fecal incontinence, respectively. Odds ratio (95% CI) calculated for the prevalence of urinary incontinence by pregnancy and mode of delivery were: any term pregnancy vs no term pregnancy was 2.46 (1.53-3.95), any term pregnancy but no vaginal deliveries (cesarean section only) vs no term pregnancy was 1.95 (0.99-3.80), any term pregnancy and at least 1 vaginal delivery vs no term pregnancy was 2.53 (1.57-4.07), and any term pregnancy but no vaginal delivery (cesarean section only) vs any term pregnancy, and at least 1 vaginal delivery was 1.30 (0.77-3.95). Odds ratio (95% CI) calculated for the prevalence of fecal incontinence by pregnancy and mode of delivery were: any term pregnancy vs no term pregnancy was 2.26 (1.22-4.19), any term pregnancy but no vaginal deliveries (cesarean section only) vs no term pregnancy was 1.13 (0.43-2.96), any term pregnancy and at least 1 vaginal delivery vs no term pregnancy was 2.41 (1.30-4.49), and any term pregnancy but no vaginal deliveries (cesarean section only) vs any term pregnancy, and at least 1 vaginal delivery was 2.15 (0.97-4.77). BMI and age did not impact these results. CONCLUSION: Pregnancy increases the risk of urinary and fecal incontinence. Cesarean section does not decrease the risk of urinary or fecal incontinence compared to pregnancy with a vaginal delivery.

[Artificial urinary sphincters in women: indications, techniques, results]
Roupret M, Chartier-Kastler E, Richard F
Prog Urol 2005 Jun;15(3):489-93.
Artificial urinary sphincter (AUS) is one of the last resort surgical treatments proposed to patients with stress urinary incontinence (SUI) due to severe sphincter incompetence. Despite convincing functional results, AUS implantation in women is a preferred treatment option only for certain teams. An abdominal approach for implantation of the prosthesis is often preferred to the transvaginal approach. The most recent data show

that more than 84% of patients are continent at 5 years. The 5-year sphincter revision rate is about 20%. In 2005, AUS is still a valid treatment option in SUI and has a real place in the urologist's therapeutic armamentarium even in the age of synthetic suburethral tape.

Does the MONARC transobturator suburethral sling cause post-operative voiding dysfunction? A prospective study.
Barry C, Naidu A, Lim Y, Corsitaans A, Muller R, Rane A
Int Urogynecol J Pelvic Floor Dysfunct 2005 Aug 11;.
The aim of this study was to compare pre-operative and post-operative voiding parameters following insertion of the MONARC transobturator tape (TOT), for treating women with urodynamic stress incontinence. This prospective observational study was conducted at a tertiary referral urogynaecology unit, in North Queensland, involving 83 women who were prospectively assessed pre-operatively and at 6-8 weeks following the procedure. Information collected included patient demographics, concomitant surgery, pre-operative and post-operative symptomatology (using validated questionnaires), and pre-operative and post-operative urodynamic parameters. Parameters used to assess voiding function included symptoms of voiding difficulty (incomplete emptying and irritative symptoms) as well as objective parameters including maximum flow rate (Q(max)), adjusted maximum flow rate (Q(maxadj)) using the Liverpool nomogram (LN), maximal urethral pressure, and post-void residual (PVR). Pre-operative average Q(max) was 23.7 ml/s compared to 21.1 ml/s post-operatively (p=0.064). When the Q(max) was adjusted for voided volume using the LN, Q(maxadj) was seen to decrease significantly from 26 ml/s to 18 ml/s (p<0.05). Women with PVR>50 ml did not differ significantly pre-operatively and post-operatively, 5/83(6%) vs 7/83 (8.4%) (p=0.75). The number of women with a flow rate <10th centile on LN was 22 (26.5%) pre-operatively vs 29 (34.9%) post-operatively (p=0.21). One (1.2%) post-operatively had voiding dysfunction diagnosed by an abnormal voiding pattern (p=0.728), which was not statistically significant. Objective voiding dysfunction as determined by adjusted flow rates <10th centile LN and >50 ml PVR was seen in four women (4.8%). Adjusted free flow rates are significantly reduced following insertion of the MONARC TOT, as are some symptoms related to voiding dysfunction. Despite this, satisfaction rates remain high with observed voiding dysfunction or objective measures of voiding dysfunction showing no statistical change in the short term. Long-term follow-up is planned at 1 year.

Intravesical injection of botulinum toxin for the treatment of overactive bladder.
Ho MH, Lin LL, Haessler AL, Bhatia NN
Curr Opin Obstet Gynecol 2005 Oct;17(5):512-8.
PURPOSE OF REVIEW: In recent years, botulinum toxin has been investigated for the treatment of various types of lower urinary tract dysfunctions. This review discusses recently published data related to the therapeutic applications of botulinum toxin in overactive bladder as well as the effects of repeated doses, cross-reactivity between different serotypes, and side effects of the toxin injection into the detrusor muscle. RECENT FINDINGS: Botulinum toxin A has been employed initially in the treatment of neurogenic detrusor overactivity in spinal cord injured patients. Since then, several reports, including a large multicenter study, have confirmed the therapeutic effects of this neurotoxin. The application of botulinum toxin A was extended to the treatment of idiopathic detrusor overactivity and similar results were obtained. Repeated injections of botulinum toxin A had the same sustained benefit. Recently, botulinum toxin B was investigated for the treatments of both neurogenic and idiopathic detrusor overactivity as well as for the management of botulinum toxin A resistant cases. SUMMARY: Although intradetrusal injection of botulinum toxin is not yet an approved treatment for overactive bladder, available data suggest that botulinum toxin can be a therapeutic option in patients with neurogenic and nonneurogenic detrusor overactivity who are refractory to anticholinergic medications. There is a need, however, for further investigation to determine the optimal conditions for these applications. A randomized, double-blinded, placebo-controlled trial to evaluate the therapeutic effects of botulinum toxin is under way.

Overactive bladder: epidemiology and social impact.
Tubaro A, Palleschi G
Curr Opin Obstet Gynecol 2005 Oct;17(5):507-511.
PURPOSE OF REVIEW: Overactive bladder epidemiology is a rapidly evolving field. The new terminology of lower urinary tract function, introduced in 2002, modified the definitions of all four components of overactive bladder. In the same year, the lack of specific information on overactive bladder prevalence was identified and consequently new studies were launched and recently published. RECENT FINDINGS: Following the new terminology, overactive bladder now includes both a purely sensory disorder and a condition related to an altered bladder behaviour. Studies conducted in selected countries and populations suggested comparable prevalence data worldwide, although the syndrome is considered to be underreported. 'Urge' is now considered the cornerstone symptom of overactive bladder. Recent epidemiological data confirm the

increase in overactive bladder prevalence with age and suggest that most diet and lifestyle factors are not associated with the condition, with the exception of body mass index. Among the symptoms, urge and urinary incontinence were considered to be more significantly related to patients' quality of life compared with frequency and nocturia. The socioeconomic consequences of the overactive bladder syndrome were recently estimated in a large US study and a total cost of US$12.6 billion was calculated. SUMMARY: Specific data on overactive bladder epidemiology are now available, providing new evidence about its relevance as a clinical issue. Both wet and dry overactive bladder cause a significant reduction in quality of life. In our daily practice we have to consider that overactive bladder is frequently underreported as patients believe that no treatment is available and urinary incontinence is considered a natural consequence of aging.

Stress Incontinence Injection Therapy: What is Best for Our Patients?
Chapple CR, Wein AJ, Brubaker L, Dmochowski R, Pons ME, Haab F, Hill S
Eur Urol 2005 Aug 20;.
OBJECTIVE:: Urethral injection (periurethral/intraurethral bulking) is an established, minimally invasive therapy for stress urinary incontinence (SUI). This review aims to determine which women should potentially benefit from, and be considered as candidates for, injection therapy and to elucidate what we are trying to achieve. METHODS:: Based on MEDLINE database searches, all aspects of urethral injection were examined, including patient selection, safety, injection technique, efficacy, quality of life, goals and cost. RESULTS:: Such therapy has a low complication rate, improves or cures about 3 out of 4 women, as shown in mainly short-term studies, and improves patients' quality of life. It can be used in the majority of patients with uncomplicated SUI. Therefore, injection therapy may be considered as a first-line treatment option for patients who have failed conservative therapy such as pelvic floor exercises and who decline or have a contraindication for pharmacological treatment. However, the decision of whether to use this type of treatment must be based on an informed discussion between the physician and patient - this dialogue should incorporate questions about patients' own treatment goals. Injection therapy appears to have the profile required to meet patients' goals, based on the findings that a procedure with an improvement in incontinence, minimal short-term risk, no long-term risk, and performed in a clinic, would be acceptable. CONCLUSION:: Investigating and trying to achieve patients' own treatment goals will ultimately enable us to do what is best for our patients, but current evidence suggests that injection therapy is a valid option worth discussing with many patients.

High incidence of vaginal mesh extrusion using the intravaginal slingplasty sling.
Siegel AL, Kim M, Goldstein M, Levey S, Ilbeigi P
J Urol 2005 Oct;174(4 Pt 1):1308-11.
PURPOSE:: The intravaginal slingplasty (IVS) is a tension-free vaginal tape variant that uses a multifilament polypropylene tape to support the mid urethra for the treatment of female stress urinary incontinence. Numerous cases of defective vaginal wound healing have been described in the international urogynecological literature. We describe our experience of vaginal mesh extrusion using the IVS sling. MATERIALS AND METHODS:: A total of 35 patients underwent suburethral sling procedures for anatomical stress urinary incontinence using the IVS system from November 2002 to September 2003. A retrospective chart review was performed to retrieve data on safety and efficacy, complications and outcomes using this product. RESULTS:: Six patients (17%) to date have presented with defective vaginal healing manifested by extrusion of the sling material. Mean time to presenting symptoms was 9 months (range 2 to 15). All patients required surgical removal of the sling material. No urethral erosions were noted. CONCLUSIONS:: Our experience suggests that the IVS sling system, which uses a multifilament polypropylene suburethral mesh, incurs an unacceptably high rate of defective vaginal wound healing and mesh extrusion.

7 – PAIN 2005 08

Effects of intradermal foot and forearm capsaicin injections in normal and vulvodynia-afflicted women.
Foster DC, Dworkin RH, Wood RW
Pain 2005 Sep;117(1-2):128-36.
Cutaneous response to capsaicin has been used to assess central sensitization in pain research. This study compared the response to intradermal capsaicin in the forearm and foot of vulvar vestibulitis (vestibulodynia)-afflicted cases and controls. We hypothesized that cases will experience greater spontaneous pain, larger cutaneous areas of punctate hyperalgesia and dynamic allodynia, and greater vascular flow than controls. We also hypothesized enhanced post-injection pain in the foot compared to the forearm based on dermatome proximity of the foot and vulva. Methods. Ten vulvar vestibulitis syndrome (VVS) cases and 10 age and ethnically matched controls underwent two randomized, cross-over trials with intra-dermal injections of capsaicin or a saline placebo in the forearm and foot. Outcome measures included

spontaneous pain level, surface area of punctate hyperalgesia, surface area of dynamic allodynia, cutaneous blood flow, regional skin temperature and vital signs. Results. VVS cases experienced greater spontaneous pain, punctate hyperalgesia and dynamic allodynia than pain-free controls. Within the VVS group, post-capsaicin spontaneous pain, punctate hyperalgesia and dynamic allodynia were similar in the forearm and foot. Post-capsaicin blood flow did not differ between cases and controls by anatomic site. Measures of depression and anxiety correlated with spontaneous pain intensity but did not correlate with measures of hyperalgesia, allodynia, or blood flow. VVS cases had higher resting pulse rates and lower resting systolic blood pressures than in controls. Conclusion. VVS patients show enhancement of post-capsaicin pain response extending far beyond the anatomic location of the primary complaint.

Treatment of Functional Gastrointestinal Disorders Associated with Abdominal Pain.
Hyams JS
J Pediatr Gastroenterol Nutr 2005 Sep;41 Suppl 1:S47-S48.

Abdominal Pain: Is It in the Gut Or in the Head?
Di Lorenzo C
J Pediatr Gastroenterol Nutr 2005 Sep;41 Suppl 1:S44-S46.

Intrarectal lidocaine is an effective treatment for abdominal pain associated with diarrhea-predominant irritable bowel syndrome.
Verne GN, Sen A, Price DD
J Pain 2005 Aug;6(8):493-6.

Food-specific IgG4 antibody-guided exclusion diet improves symptoms and rectal compliance in irritable bowel syndrome.
Zar S, Mincher L, Benson MJ, Kumar D
Scand J Gastroenterol 2005 Jul;40(7):800-7.

Increased beta-adrenergic sensitivity correlates with visceral hypersensitivity in patients with constipation-predominant irritable bowel syndrome.
Park JH, Rhee PL, Kim HS, Lee JH, Kim YH, Kim JJ, Rhee JC, Kang EH, Yu BH
Dig Dis Sci 2005 Aug;50(8):1454-60.

The Use of Lactobacillus GG in Irritable Bowel Syndrome in Children: A Double-blind Randomized Control Trial.
Bausserman M, Michail S
J Pediatr 2005 Aug;147(2):197-201.
To determine whether oral administration of the probiotic Lactobacillus GG under randomized, double-blinded, placebo-controlled conditions would improve symptoms of irritable bowel syndrome (IBS) in children. STUDY DESIGN: Fifty children fulfilling the Rome II criteria for IBS were given Lactobacillus GG or placebo for 6 weeks. Response to therapy was recorded and collected on a weekly basis using the Gastrointestinal Symptom Rating Scale (GSRS). RESULTS: Lactobacillus GG was not superior to placebo in relieving abdominal pain (40.0% response rate in the placebo group vs 44.0% in the Lactobacillus GG group; P=.774). There was no difference in the other gastrointestinal symptoms, except for a lower incidence of perceived abdominal distention (P=.02 favoring Lactobacillus GG). CONCLUSIONS: Lactobacillus GG was not superior to placebo in the treatment of abdominal pain in children with IBS but may help relieve such symptoms as perceived abdominal distention.

Hypnotherapy for irritable bowel syndrome: a role in pediatric practice?
Agrawal A, Whorwell PJ
J Pediatr Gastroenterol Nutr 2005 Sep;41 Suppl 1:S49-50.

8 – FISTULAE 2005 08
Fistula-in-ano: do antibiotics make a difference?
Nunoo-Mensah JW, Balasubramaniam S, Wasserberg N, Artinyan A, Gonzalez-Ruiz C, Kaiser AM, Beart RW Jr, Vukasin P
Int J Colorectal Dis 2005 Aug 10;:1-3.
BACKGROUND: The objective of this study was to evaluate the hypothesis that antibiotics in conjunction with drainage of anorectal abscesses will reduce the incidence of fistulae formation. The impact of age and associated comorbidity on the formation of fistulae were also evaluated. METHODS: Patients with a

diagnosis of anorectal abscesses were identified from the database of a single colorectal practice. Demographic data, comorbidity, antibiotic usage, and fistulae formation were collected from review of patient's charts and phone contact. Statistical analysis was performed with the two-sided Fisher's exact and Wald's chi-square tests. RESULTS: Fifty-six patients with complete data were analyzed. The overall fistulae formation rate was 32%. Of all patients, 45% received a course of broad-spectrum antibiotics at the time of drainage and 48% of patients had associated comorbidity. Although trends were evident, there were no statistical significant associations between fistulae formation and age, comorbidity, and antibiotics. CONCLUSION: Although not statistically significant, there was a trend that antibiotics and age >45 years may be protective against the formation of fistulae. Similarly, the data suggest that the presence of comorbidity may increase the risk of fistula formation. We are encouraged by this result and propose to conduct a larger randomized prospective study.

9 – BEHAVIOUR, PSYCHOLOGY, SEXOLOGY 2005 08

Are reports of childhood abuse related to the experience of chronic pain in adulthood? A meta-analytic review of the literature.

Davis DA, Luecken LJ, Zautra AJ
Clin J Pain 2005 Sep-Oct;21(5):398-405.
BACKGROUND: Recent empirical evidence suggests that childhood abuse may be related to the experience of chronic pain in adulthood. To date, a systematic quantitative review of the literature has not been presented. OBJECTIVES: The purpose of this study was to use meta-analytic procedures to evaluate the strength of existing evidence of the association between self-reports of childhood abuse and the experience of chronic pain in adulthood. METHODS: Analyses were designed to test the relationship across several relevant criteria with 4 separate meta-analyses. RESULTS: Results of the analyses are as follows: 1) individuals who reported being abused or neglected in childhood also reported more pain symptoms and related conditions than those not abused or neglected in childhood; 2) patients with chronic pain were more likely to report having been abused or neglected in childhood than healthy controls; 3) patients with chronic pain were more likely to report having been abused or neglected in childhood than nonpatients with chronic pain identified from the community; and 4) individuals from the community reporting pain were more likely to report having been abused or neglected than individuals from the community not reporting pain. CONCLUSION: Results provide evidence that individuals who report abusive or neglectful childhood experiences are at increased risk of experiencing chronic pain in adulthood relative to individuals not reporting abuse or neglect in childhood.

Is self-reported childhood abuse history associated with pain perception among healthy young women and men?

Fillingim RB, Edwards RR
Clin J Pain 2005 Sep-Oct;21(5):387-97.
OBJECTIVE: A self-reported history of childhood physical and/or sexual abuse is frequently reported among chronic pain populations and has been associated with poorer adjustment to pain. In addition, self-reported abuse history has been related to increased pain complaints in population-based studies. One possible explanation for the association between abuse and clinical pain is that abuse victims may display enhanced sensitivity to painful stimuli, which increases the risk of developing clinical pain. However, the limited evidence addressing this issue has been mixed. The purpose of this study was to examine the association between self-reported history of childhood sexual or physical abuse and experimental pain responses in a nonclinical sample of generally healthy young adults. DESIGN: Participants were 110 (56 female, 54 male) college students who completed a series of questionnaires assessing abuse history, recent pain, health care utilization, perceived health, and psychologic variables. Also, measures of thermal and ischemic pain threshold and tolerance were obtained in all participants. In addition, a procedure assessing temporal summation of heat pain was conducted in which intensity and unpleasantness ratings of repetitive thermal stimuli were obtained. Systolic and diastolic blood pressure and heart rate were assessed at resting and during the ischemic pain task. RESULTS: Participants with a positive childhood abuse history were oversampled, yielding 21 out of 56 (37.5%) women with a positive history of abuse and 13 out of 54 (24.1%) PHA men. No abuse group differences emerged for thermal or ischemic pain thresholds or tolerances (P values>0.05). However, compared to women with no childhood abuse history, women with a positive history of abuse provided significantly lower average pain unpleasantness and peak pain unpleasantness ratings and lower unpleasantness ratings of the first trial during the temporal summation procedure, whereas no abuse group differences emerged for men. Also, compared to participants with no childhood abuse history, participants of both genders with a positive history of abuse demonstrated smaller increases (ie, less temporal summation) in pain unpleasantness ratings across trials of thermal stimulation, and participants with a positive history of abuse showed greater decreases in pain intensity and unpleasantness after

reaching their peak pain level (ie, greater wind-down) compared to participants with no childhood abuse history. In addition, participants with a positive history of abuse reported more sites of recent pain, poorer perceived health, greater somatization, and more negative affect. No group differences in resting cardiovascular measures or cardiovascular reactivity were observed. CONCLUSION: These findings indicate that a self-reported history of childhood abuse is associated with decreased sensitivity to experimentally induced pain, especially among women. However, abuse history was associated with increased pain complaints, poorer self-reported health, and greater negative affect. These data highlight the complexity of the relationship between abuse history and pain and illustrate the need for further investigation of potential pain-related correlates of abuse.

Sexual and physical abuse in women with fibromyalgia syndrome: a test of the trauma hypothesis.
Ciccone DS, Elliott DK, Chandler HK, Nayak S, Raphael KG
Clin J Pain 2005 Sep-Oct;21(5):378-86.
OBJECTIVES: According to the trauma hypothesis, women with fibromyalgia syndrome (FMS) are more likely to report a history of sexual and/or physical abuse than women without FMS. In this study, we rely on a community sample to test this hypothesis and the related prediction that women with FMS are more likely to have posttraumatic stress disorder than women without FMS. METHODS: Eligibility for the present study was limited to an existing community sample in which FMS and major depressive disorder were prevalent. The unique composition of the original sample allowed us to recruit women with and without FMS from the community. A total of 52 female participants were enrolled in the present FMS group and 53 in the control (no FMS) group. Sexual and physical abuse were assessed retrospectively using a standardized telephone interview. RESULTS: Except for rape, sexual and physical abuse were reported equally often by women in the FMS and control groups. Women who reported rape were 3.1 times more likely to have FMS than women who did not report rape ($P<0.05$). There was no evidence of increased childhood abuse in the FMS group. Women with FMS were more likely to have posttraumatic stress disorder symptoms (intrusive thoughts and arousal) as well as posttraumatic stress disorder diagnosis ($P<0.01$). DISCUSSION: With the exception of rape, no self-reported sexual or physical abuse event was associated with FMS in this community sample. In accord with the trauma hypothesis, however, posttraumatic stress disorder was more prevalent in the FMS group. Chronic stress in the form of posttraumatic stress disorder but not major depressive disorder may mediate the relationship between rape and FMS.

Documented and self-reported child abuse and adult pain in a community sample.
Brown J, Berenson K, Cohen P
Clin J Pain 2005 Sep-Oct;21(5):374-7.
OBJECTIVES: To examine the association of chronic pain in young adults with childhood exposure to maltreatment and to determine whether depressive symptoms mediate such an association. DESIGN: A total of 649 members of a randomly selected cohort of young adults from a multiwave, multi-informant epidemiological study were interviewed with regard to chronic pain and symptoms of major depressive disorder. Maltreatment was measured both by retrospective self-report and by official records of substantiated child maltreatment. OUTCOME MEASURES: Current complaints of frequent pain and functionally impairing chronic pain were assessed in young adult interviews at mean age 22. RESULTS: Net of demographic factors, adult chronic pain was associated with self-reported sexual abuse. This association persisted after the contribution of concurrent depression was statistically controlled. Elevations of pain attributable to documented maltreatment were comparatively modest and below the threshold of statistical significance. Pain complaints in participants who self-reported physical abuse were not significantly elevated. CONCLUSIONS: Overall, results show an association between self-reported sexual abuse history and adult pain complaints in this general population sample, which was not attributable to symptoms of depression at the time of such reports.

10 – MISCELLANEOUS 2005 08

Transvaginal laparoscopy.
Gordts S, Puttemans P, Gordts S, Brosens I, Campo R
Best Pract Res Clin Obstet Gynaecol 2005 Aug 5;.
Transvaginal laparoscopy (TvL) offers an alternative to standard diagnostic laparoscopy in subfertile patients without obvious pelvic pathology. With a specially developed needle-trocar system, access to the pouch of Douglas is gained through a needle puncture of the posterior fornix. Performed under local anaesthesia or sedation with the patient in a dorsal decubitus position and using prewarmed Ringer lactate as a distension medium, TvL allows complete exploration of the tubo-ovarian structures without supplementary manipulation. The combination of transvaginal sonography and transvaginal endoscopy, including minihysteroscopy, TvL,

salpingoscopy and chromopertubation test, permits the most complete exploration of the reproductive tract and can be used as a first-line investigation of female fertility in a one-stop infertility clinic. As the transvaginal route offers easy access to the tubes, ovaries and fossa ovarica, some operative procedures are possible. However, in the absence of a panoramic view, these will be limited to minor interventions.

Well leg compartment syndrome after pelvic and perineal surgery in the lithotomy position.
Simms MS, Terry TR
Postgrad Med J 2005 Aug;81(958):534-6.
OBJECTIVE: Lower limb compartment syndrome after prolonged surgical procedures performed in the lithotomy position is a rare but potentially devastating complication. It is recognised after urological, colorectal, and gynaecological procedures. Sixteen cases of compartment syndrome after urological surgery have been reported. The objective of this study was to estimate the incidence of this complication in urological practice and identify risk factors for its development. DESIGN: A postal survey of UK consultant urologists was conducted. RESULTS: Replies were received from 261 consultants. In total there were 65 cases of compartment syndrome. Compartment syndrome occurred after radical cystectomy and urinary diversion in 51 cases and was rare in procedures lasting less than four hours. The incidence of compartment syndrome after cystectomy was estimated at around 1 in 500 cases. Risk factors for its development included perioperative blood loss, peripheral vascular disease, and obesity. CONCLUSIONS: Compartment syndrome after use of the lithotomy position may be more common than is generally appreciated and has been underreported in the past. All staff should be aware of this serious complication and adopt strategies for its avoidance.

Chronic inflammation of the peritoneum and vagina: review of its significance, immunologic pathogenesis, investigation and rationale for treatment.
Thomson JC
J Reprod Med 2005 Jul;50(7):507-12.
Chronic inflammation is not an infrequent histologic finding in symptomatic gynecologic patients. It is present in 14.6% of peritoneal biopsies in women with chronic pelvic pain in whom no other cause of pain is evident. It is found in almost all vaginal biopsies in noninfected women with dyspareunia and discharge of vaginal mucosal origin. It represents a local immunologically activated inflammatory disorder. When investigations are car ried out as to whether it is a local representation of a systemic disorder, numerous systemic inflammatory and autoimmune disorders are discovered. A study of chronic pain reveals that the immune system is intimately involved in the production, conduction and exacerbation of pain and of its clinicalfeatures, such as hyperalgesia and allodynia. Immune modification using local steroids and disease-modifying antirheumatic drugs, such as hydroxychloroquine, are known to inhibit inflammatory cells and cytokines, such as interleukin-1, interleukin-6 and tumor necrosis factor, which are responsible for pain and tissue damage. These drugs are found to be effective in the treatment of chronic pelvic pain when of an inflammatory nature and for symptomatic chronic inflammation of the vagina.

Endometrial Cancer and Hormone-Replacement Therapy in the Million Women Study.
Obstet Gynecol Surv 2005 Sep;60(9):595-597.
Women taking estrogen alone as hormone replacement therapy (HRT) are at increased risk of developing endometrial cancer. At present, postmenopausal women who have not had a hysterectomy may be given combined estrogen-progestogen or tibolone, a synthetic steroid having estrogenic, progestogenic, and androgenic properties. The effect of such treatment on the risk of endometrial cancer was examined in 716,738 postmenopausal women in the United Kingdom without a history of hysterectomy or cancer who were followed up for 3.4 years on average, during which time 1320 endometrial cancers were diagnosed. Among 320,953 women (45%) reporting the use of HRT, 22% had last used continuous combined progestogen/estrogen treatment for 10 to 14 days each month. Another 9% had most recently taken tibolone, and 4% had last used estrogen-only HRT.Compared with women never using HRT, those who had last used continuous combined HRT had a lower risk of endometrial cancer (relative risk [RR], 071; 95% confidence interval [CI], 0.56-0.90). Risk was unchanged in women who last used cyclical combined HRT, and it was increased in those who had last used tibolone (RR, 1.79; 95% CI, 1.43-2.25) and also in those who last used estrogen-only HRT (RR, 1.45; 95% CI, 1.02-2.06). The relative risk of endometrial cancer decreased with increasing obesity. Standardized incidence rates of endometrial cancer per 1000 women over a 5-year period are shown in . Unlike endometrial cancer, the risk of breast cancer was greater with combined HRT-continuous or cyclical-than with tibolone or estrogen-only HRT. Compared with never-users, women who currently used combined preparations had a significantly greater incidence of endometrial and breast cancers combined than did women who never had used HRT ().(Figure is included in full-text article.)(Figure is included in full-text article.)These findings indicate that combining endometrial and breast cancers, the risk is greater in women using combined HRT, either continuously or cyclically, than in those

using other measures because of the much greater frequency of breast cancer than endometrial cancer.

A Randomized, Placebo-Controlled Trial of Certolizumab Pegol (CDP870) for Treatment of Crohn's Disease.
Schreiber S, Rutgeerts P, Fedorak RN, Khaliq-Kareemi M, Kamm MA, Boivin M, Bernstein CN, Staun M, Thomsen OO, Innes A
Gastroenterology 2005 Sep;129(3):807-818.
Background & Aims: To investigate the efficacy and safety of certolizumab pegol (a polyethylene-glycolated Fab' fragment of anti-tumor necrosis factor, CDP870) in Crohn's disease. Methods: In a placebo-controlled, phase II study, 292 patients with moderate to severe Crohn's disease received subcutaneous certolizumab 100, 200, or 400 mg or placebo at weeks 0, 4, and 8. The primary end point was the percentage of patients with a clinical response at week 12 (a Crohn's Disease Activity Index decrease of >/= 100 points or remission [Crohn's Disease Activity Index </= 150 points]) in the intent-to-treat population. Results: All certolizumab doses produced significant clinical benefit over placebo at week 2 (placebo, 15.1%; certolizumab 100 mg, 29.7% [P = .033]; 200 mg, 30.6% [P = .026]; 400 mg, 33.3% [P = .010]). At all time points, the clinical response rates were highest for certolizumab 400 mg, greatest at week 10 (certolizumab 400 mg, 52.8%; placebo, 30.1%; P = .006) but not significant at week 12 (certolizumab 400 mg, 44.4%; placebo, 35.6%; P = .278). Patients with baseline C-reactive protein levels of 10 mg/L or greater (n = 119) showed clearer separation between active treatment and placebo (week 12 clinical response: certolizumab 400 mg, 53.1%; placebo, 17.9%; P = .005; post hoc analysis) owing to a lower placebo response rate than patients with C-reactive protein levels of less than 10 mg/L. Adverse events were similar among groups. Conclusions: Certolizumab 400 mg may be effective and is well tolerated in patients with active Crohn's disease. High placebo response rates in the large patient subgroup with low C-reactive protein levels may have obscured statistical separation between certolizumab and placebo. Ongoing phase III trials are necessary to establish the clinical efficacy of certolizumab.

Budesonide for maintenance of remission in patients with Crohn's disease in medically induced remission: a predetermined pooled analysis of four randomized, double-blind, placebo-controlled trials.
Sandborn WJ, Lofberg R, Feagan BG, Hanauer SB, Campieri M, Greenberg GR
Am J Gastroenterol 2005 Aug;100(8):1780-7.
OBJECTIVES: To evaluate the efficacy and safety of oral budesonide for maintenance of remission in patients with mild to moderately active Crohn's disease (CD) of the ileum and/or ascending colon. METHODS: Four double-blind, placebo-controlled trials with identical protocols were combined according to a predetermined analysis plan. Three hundred eighty patients with CD in medically induced remission (CD activity index [CDAI]< or =150) were randomized to receive oral budesonide 3 mg, 6 mg, or placebo daily for 12 months. The primary outcome measure was time to relapse (increase in CDAI of 60 points above baseline and >150). RESULTS: The median time to relapse was 268, 170, and 154 days for budesonide 6 mg, budesonide 3 mg, and placebo groups, respectively (p= 0.0072). The frequency of adverse events and glucocorticosteroid side effects were similar in all groups. CONCLUSION: Budesonide 6 mg/day is effective for prolonging time to relapse and for significantly reducing rates of relapse at 3 and 6 months but not 12 months in patients with CD in medically induced remission.

Disseminated mixed intestinal dysmotility(DMID): a new intestinal ganglion cell disorder?
Kobayashi H, Yamataka A, Lane GJ, Miyano T
Pediatr Surg Int 2005 Aug 25;:1-6.
We experienced two cases with disseminated HP and IND occurring with normal bowel in between (disseminated mixed intestinal dysmotility-DMID) and postulate whether it could be classified as a new intestinal motility disorder. Our cases, both boys, died at 3 and 7 months, respectively. Both had irregular stool passage, and abdominal distention with bilious vomiting since birth. On barium enema, both had rigid distal ileum and colon with narrow lumens, with dilated and atonic proximal ileum and jejunum. An ileostomy was created on days 3 and 2 of life, respectively, however, they did not function and jejunostomies were created, which also did not function well. Both boys died after repeated episodes of severe enterocolitis. In each case, three 10 cm specimens were obtained randomly from the jejunum and ileum, and two 5 cm specimens were obtained randomly from each of the ascending colon, transverse colon, descending colon, and rectum and treated with hematoxylin and eosin (H & E) staining, acetylcholine esterase (AchE) histochemistry, and protein gene product 9.5 (PGP9.5) and neural cell adhesion molecule (NCAM) immunohistochemistry for histopathologic assessment. All specimens showed a mixture of disseminated IND and HP, with normal intestine in between. There was abnormal expression of NCAM activity in the intestinal smooth muscle layers in small and large intestine. This is the first report about disseminated IND and HP occurring with normal bowel in between (DMID) and we suggest it should be classified as a new intestinal

motility disorder. The present findings demonstrate that patients with DMID have a complicated abnormality of NMJ that may directly influence bowel motility and prognosis according to the severity of the abnormality.

Distribution of lymph node metastasis in T1 sigmoid colon carcinoma: should we ligate the inferior mesenteric artery?
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Scand J Gastroenterol 2005 Jul;40(7):858-61.
OBJECTIVE: In standard oncological sigmoid colectomy, the inferior mesenteric artery is ligated either at its origin or at the level of the left colic artery. However, in patients with early-stage carcinoma, the distribution of metastatic nodes may be limited. The aim of this study was to clarify the prevalence and distribution of lymph node metastasis in T1 sigmoid colon carcinoma and to determine the adequate range of lymph node dissection. MATERIALS AND METHODS: The study included 121 consecutive patients treated for T1 sigmoid colon carcinoma. Clinicopathologic factors associated with nodal metastasis and the distribution of metastatic nodes were analyzed. RESULTS: Of 121 patients, 12 (10%) had nodal involvement. The depth of invasion and the presence of lymphatic and vascular invasion were significantly associated with nodal metastasis. Of these 12 patients, 11 (92%) had lymph node metastasis confined to pericolic nodes. Nodes along the sigmoidal artery were involved in one patient. There was no involved node along the superior rectal artery or at the root of the inferior mesenteric artery. CONCLUSIONS: Lymph node dissection for T1 sigmoid colon carcinoma should be limited to the root of the sigmoidal artery, and the inferior mesenteric artery should be preserved.

Use of prebiotics for inflammatory bowel disease.
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The relevance of diet in both the pathogenesis and the therapy of inflammatory bowel disease is an evolving science. Disturbance of intestinal microflora (dysbiosis) is putatively a key element in the environmental component causing inflammatory bowel disease. Prebiotics are among the dietary components used in an attempt to counteract dysbiosis. Such predominantly carbohydrate dietary components exert effects on the luminal environment by physicochemical changes through pH alteration, by production of short chain fatty acids and by selectively promoting putatively 'health-beneficial' bacteria. The present review elaborates on some of the background rationale and mechanisms on the use of prebiotics. Additionally, published animal and human trials are discussed.