Pelvic Floor Digest

*This section presents a small sample of the Pelvic Floor Digest, an online publication (**www.pelvicfloordigest.org**) that reproduces titles and abstracts from over 200 journals. The goal is to increase interest in all the compartments of the pelvic floor and to develop an interdisciplinary culture in the reader.*

FORUM

Stem cell differentiation by functionalized micro- and nanostructured surfaces. *Martínez E, Lagunas A, Mills CA et al. Nanomedicine 2009;4:65.* New nanotechnologies have provided with enormous possibilities when designing customized supports and scaffolds with controlled nanoscale topography and chemistry. This article reviews the main strategies followed to achieve solutions to the challenge for furthering fundamental biology studies.

Beyond the impact factor. *Watts G. BMJ. 2009;338:b553.* The article stresses the importance of measuring the social impact of research, and discusses about RAE (research assessment exercise) and its replacement, the REF (research excellence framework).

1 – THE PELVIC FLOOR

Effect of surgically induced weight loss on pelvic floor disorders in morbidly obese women. *Wasserberg N, Petrone P, Haney M et al. Ann Surg. 2009;249:72.* Bariatric surgery has a beneficial effect on symptoms of pelvic floor disorders in morbidly obese women with a significant reduction in total mean distress scores after surgery attributed mainly to the significant decrease in urinary symptoms but also for improvement in the pelvic organ prolapse domain. Age, parity, history of complicated delivery, percent excess body weight loss, BMI, type of weight loss procedure and presence of diabetes mellitus and hypertension have no predictive value for postoperative outcomes.

Surgical outcomes of VRAM versus thigh flaps for immediate reconstruction of pelvic and perineal cancer resection defects. *Nelson RA, Butler CE. Plast Reconstr Surg. 2009;123:175.* The surgical outcomes and complications in 133 cancer patients who underwent immediate reconstruction of defects following abdominoperineal resection or pelvic exenteration with vertical rectus abdominis myocutaneous (VRAM) versus thigh flaps are compared. Immediate VRAM flaps result in fewer major complications without increased early abdominal wall morbidity.

Combined surgery in pelvic organ prolapse is safe and effective. *Riansuwan W, Hull TL, Bast J, Hammel JP. Colorectal Dis. 2009 Jan 17 Epub.* Combined surgery for pelvic organ prolapse is safe and effective when considering outcomes of rectal prolapse surgery (93 operations in this study). Surgeons should not hesitate to address all pelvic floor issues during the same operation by working in partnership with the anterior pelvic floor colleagues.

2 – FUNCTIONAL ANATOMY

Circadian variation of rectal sensitivity and gastrointestinal peptides in healthy volunteers. *Enck P, Kaiser C, Felber M et al. Neurogastroenterol Motil. 2009;21:52.* There are significant differences in the perception of rectal distension stimuli for urge and pain depending on daytime, but the release of gastrointestinal peptides seems not to be involved. This circadian variation needs to be taken into account in patients and volunteer studies.

Pubo-urethral ligament injury causes long-term stress urinary incontinence in female rats: an animal model of the integral theory. *Kefer JC, Liu G, Daneshgari FJ. Urol. 2009;181:397.* A novel rat model (pubo-urethral ligament transaction that was compared to bilateral pudendal nerve transaction) can be used to investigate mechanisms of SUI in females, including the role of urethral hypermobility and potential therapeutic interventions.

Modulation of opioid actions by nitric oxide signaling. *Toda N, Kishioka S, Hatano Y, Toda H. Anesthesiology. 2009;110:166.* Endogenous oxide (nitric endothelial, neurogenic and inducible) plays pivotal roles in controlling physiological functions, participates in pathophysiological intervention, and is involved in mechanisms of therapeutic agents. This paper deals with modulation of morphine actions by nitric oxide as being useful in establishing new strategies for efficient antinociceptive treatment.

3 – DIAGNOSTICS

Factors influencing patient satisfaction when undergoing endoscopic procedures. *Ko HH, Zhang H, Telford JJ, Enns R. Gastrointest Endosc. 2009;69:883.* To identify factors related to patient satisfaction with endoscopy (EGD, colonoscopy) 261 patients were studied and 86.6% were very satisfied with doctor's personal manner and technical skills, nurse's personal manner, physical environment, and more time with doctor discussing the procedure. Initial satisfaction may depend on residual sedation, but it tends to decrease over time possibly because of recall bias.

Reliability of physical examination for diagnosis of myofascial trigger points: a systematic review of the literature. *Lucas N, Macaskill P, Irwig L et al. Clin J Pain. 2009;25:80.* Trigger points are promoted as an important cause of musculoskeletal pain, however there is no accepted reference standard for their diagnosis, and data on the reliability of physical examination for trigger points are conflicting and the matter needs to be further investigated with studies of high quality.

Do patients undergo prostate examination while having a colonoscopy? *Hammett T, Hookey LC, Kawakami J. Can J Gastroenterol. 2009;23:37.* Colonoscopy is an ideal opportunity for physicians to use a digital rectal examination to assess for prostate cancer. Physicians performing colonoscopies in men 50 to 70 years of age should pay special attention to the prostate while doing a digital rectal examination before colonoscopy. In a study on 846 colonoscopies performed by 17 physicians only in 15.0% of cases a comment regarding the prostate was made. This novel concept may help maximize resources for cancer screening and could increase the detection rate of clinically palpable prostate cancer.

CT Colonography: techniques and applications. *Yee J. Radiol Clin North Am. 2009;47:133.* CTC, also termed virtual colonoscopy, is increasingly accepted at sites throughout the world as a new effective tool for the diagnosis and screening of colorectal carcinoma. This article presents information of related issues of bowel cleansing, stool and fluid tagging, bowel distention, multidetector CT scanning parameters, appropriate applications, and potential complications.

Importance of gender, socioeconomic status, and history of abuse on patient preference for endoscopist. *Schneider A, Kanagarajan N, Anjelly D et al. Am J Gastroenterol. 2009;104:340.* Both men and women with a history of abuse are significantly more likely to prefer a woman endoscopist. Physicians should be aware of these high preference rates to increase compliance and optimize patient care.

4 – PROLAPSES

Robotic-assisted sacrocolpopexy: technique and learning curve. *Akl MN, Long JB, Giles DL, Cornella JL et al. Surg Endosc. 2009 Jan 27. Epub.* Laparoscopic sacrocolpopexy (LSCP) offers a minimally invasive approach for treating vaginal vault prolapse. The Da Vinci robotic

The PFD continues on page 9

continued from page 7

surgical system may further decrease the difficulty of the procedure with acceptable complication rates and short learning curve: 2/80 patients had injury to the bladder, one a small bowel injury, and one patient had a ureteric injury, 5 developed vaginal mesh erosion, one a pelvic abscess, and one had postoperative ileus, 4 were converted to laparotomy.

Clinical pathway for tension-free vaginal mesh procedure: evaluation in 300 patients with pelvic organ prolapse. *Kato K, Suzuki S, Yamamoto S et al. Int J Urol. 2009;16:314.* Excluding five patients with concomitant hysterectomy, 305 consecutive women with POP-Q stage 3 or 4 between 2006 and 2007 were planned a TVM procedure with removal of the indwelling urethral catheter on the next morning, discharge on postoperative day 3. Perioperative complications were: bladder injury (11 cases), vaginal wall hematoma (2), rectal injury (1) and temporary hydronephrosis (1). The catheters were removed on the next morning in 95.6% of the cases, none required intermittent catheterization at home. Postoperative hospitalization was as planned in 93.3% of the cases. Two patients were re-hospitalized within one month due to vaginal bleeding or gluteal pain. Patients generally accepted the early discharge in spite of the Japanese culture preferring a longer hospital stay.

Trocar-guided transvaginal mesh repair of pelvic organ prolapse. *Elmér C, Altman D, Engh M et al. Obstet Gynecol. 2009;113:127.* A prospective multicenter cohort study performed throughout 26 clinics on 261 patients evaluated at 2 and 12 months with POP-Q, Incontinence Impact Questionnaire (IIQ-7), Urogenital Distress Inventory (UDI-6). Anatomic cure (POP-Q stage 0-I) was observed in 79% after anterior repair with polypropylene mesh, 82% after posterior repair. For anterior and posterior repair cure was 81 and 86% respectively for the anterior and posterior compartment. Bladder and rectal perforations occurred in 3.4%, vaginal erosions in 11%). Surgical intervention due to mesh exposure occurred in 2.8%. There were significant quality-of-life improvements in all domains of the IIQ-7. Despite significant improvements in UDI-6 scores, symptoms specific for SUI were not ameliorated.

Sexual dysfunction after trocar-guided transvaginal mesh repair of pelvic organ prolapse. *Altman D, Elmér C, Kiilholma P et al. Obstet Gynecol. 2009;113:127.* To estimate sexual dysfunction before and after trocar-guided transvaginal mesh surgery for pelvic organ prolapse in 105 sexually active women participating in a prospective multicenter study using the short form of the Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12). Overall scores worsened 1 year after surgery due to a worsening of all symptoms in the behavioral-emotive and partner-related items, whereas improvements were observed in physical function. Rates and severity of dyspareunia neither improved nor worsened.

Nerve injury during uterosacral ligament fixation: a cadaver study. *Collins SA, Downie SA, Olson TR, Mikhail MS. Int Urogynecol J Pelvic Floor Dysfunct. 2009 Jan 27. Epub.* The inferior hypogastric plexus is vulnerable during uterosacral ligament fixation. Entrapment of S2 and S3 fibers could cause pain in their respective dermatomes and could be responsible for the postoperative pain described in the literature.

5 – RETENTIONS

Proposal for a urodynamic redefinition of detrusor underactivity. *Cucchi A, Quaglini S, Rovereto B. J Urol. 2009;181:225.* In male patients with nonneurological conditions, no obstruction, mainly voiding lower urinary tract symptoms and detrusor underactivity, intrinsic detrusor speed is more compromised than intrinsic strength. The definition of idiopathic detrusor underactivity of a slower and/or weaker bladder with or without poorly sustained micturition contractions is more effective than a definition of decreased detrusor contraction strength and/or poorly sustained micturition contractions. This may reflect the evolution from an initial stage to obviously impaired voiding function.

Constipation does not develop following elective hysterectomy: a prospective, controlled study. *Sperber AD, Morris CB, Greemberg L et al. Neurogastroenterol Motil. 2009;21:18.* There have been retrospective or uncontrolled reports that women develop constipation following hysterectomy. This study challenges existing data: in 132 elective surgery patients with hysterectomy compared to 123 controls there was no difference between the groups at any follow-up point in functional constipation, frequency of stools, stool consistency, straining, feeling of obstruction or need to manually evacuate stool, though many developed abdominal pain.

Reinterventions after complicated or failed STARR procedure. *Pescatori M, Zbar AP. Int J Colorectal Dis. 2009;24:87.* The stapled transanal rectal resection procedure has been suggested as a surgical option for patients presenting with evacuatory difficulty in the clinical presence of a rectocele. In 20 patients referred with 13 cases operated upon, reinterventions had to be performed for three complications and ten failures including recurrent OD, severe proctalgia, and fecal incontinence. Overall, 11 patients underwent biofeedback and psychotherapy. Only 5 patients with no psychological overlay became asymptomatic or improved. The STARR procedure requires careful patient selection to determine the associated pelvic floor pathology and pre-existent psychopathology.

Pilot study on the effect of linaclotide in patients with chronic constipation. *Johnston JM, Kurtz CB, Drossman DA et al. Am J Gastroenterol 2009; 104:125.* Linaclotide, a novel peptide agonist of guanylate cyclase-C receptors, has been shown in animal studies to stimulate intestinal fluid secretion and transit. In 42 patients with chronic constipation it improved bowel habits and symptoms, Further randomized controlled trials are warranted as this common gastrointestinal disorder has limited treatment options.

6 – INCONTINENCES

Simultaneous laceration of external iliac artery and vein complicating anterior vaginal wall sling operation for stress urinary incontinence. *Gul U, Turunc T, Yaycioglu O. Int Urogynecol J Pelvic Floor Dysfunct. 2009 Jan 27. Epub.* The needle carrier was inserted from the suprapubic area down to the vaginal lumen. The measures to be taken to avoid this life threatening complication are discussed.

Physiological, psychological, and behavioural characteristics of men and women with faecal incontinence. *Maeda Y, Vaizey CJ, Hollington P, Stern J, Kamm MA. Colorectal Dis. 2008 Oct 21. Epub.* The factors leading to faecal incontinence in males are less well understood than those in females. In this prospective study physiological, anatomical, psychological, and behavioural characteristics of male (34) and female (75) patients were compared. Nearly 40% of men with faecal incontinence report it in the absence of a definable functional or structural sphincter abnormality. Differences were observed in physiological characteristics and coping behaviours of men and women.

Post radical hysterectomy urinary incontinence: a prospective study of transurethral bulking agents injection. *Plotti F, Zullo MA, Sansone M et al. Gynecol Oncol. 2009;112:90.* Macroplastique transurethral injection can be a valid option having no surgical complications (24 patients). This therapeutic strategy is able to treat SUI and improve postoperative well being.

Radiofrequency energy delivery to the anal canal: is it a promising new approach to the treatment of fecal incontinence? *Kim DW, Yoon HM, Park JS et al. Am J Surg. 2009;197:14.* The SECCA procedure was used in 8 patients with fecal incontinence. The Fecal Incontinence Severity Index score and the Fecal Incontinence-related Quality of Life scale scale were not improved significantly and considerable complications (anal bleeding, pain, and mucosal discharge) were associated.

Effect of mode of delivery on the incidence of urinary incontinence in primiparous women. *Boyles S, Li H, Mori T et al. Obstet Gynecol. 2009;113:134.* Urinary incontinence is common in the immediate postpartum period after a woman's first pregnancy. Vaginal delivery increases the risk of urinary incontinence, but labor and pushing alone followed by cesarean delivery do not appear to increase this risk significantly.

The PFD continues on page 13