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.

1 – THE PELVIC FLOOR

Outcome measures in urogynaecology: the clinicians’ perspective. Robinson D, Anders K, Cardozo L, Bidmead J. Int Urogynecol J Pelvic Floor Dysfunct. 2007;18:273-9. A postal questionnaire-based study was sent to members of the International Continence Society (UK). The questionnaire asked about expectations following treatment and use of outcome measures. Clinicians have realistic expectations following treatment, although there is poor agreement with those expectations expressed by patients. These findings may help to explain why patients may be disappointed regarding treatment outcomes and why there may be a difference between subjective clinical impression of success and patient satisfaction. In addition there is a lack of conformity in the use of outcome measures in both the clinical and research settings.


2 – FUNCTIONAL ANATOMY

Does bladder neck descent increase with age? Dietz HP. Int Urogynecol J Pelvic Floor Dysfunct. 2007 Apr 14; epub. Epidemiological studies support the assumption that pelvic organ descent and prolapse increase with age. Bladder neck descent, cystocele descent and urethral rotation were evaluated on maximal Valsalva manoeuvre using trans-labial ultrasound in 790 women referred for evaluation of pelvic floor disorders. There was a weak negative correlation between bladder neck descent and age, which was absent in nulliparous women and stronger in parous women. This relationship was evident after menopause.


Age effects on anorectal pressure in anal continence with lower urinary tract dysfunction. Ng SC, Chen GD. Int Urogynecol J Pelvic Floor Dysfunct. 2007;18:295-300. There is a trend where anorectal pressure reduces as an anal-continent woman ages, especially at the anal sphincter area in women with lower urinary tract symptoms demonstrated by a complete urogynaecological evaluation including multichannel urodynamic study. The anterior and left sides of the anorectal sphincter seem to be the most vulnerable in the aging process.

3 – DIAGNOSTICS

Visual assessment of uroflowmetry curves: description and interpretation by urodynamists. Gacci M, Del Popolo G, Artibani W et al. World J Urol. 2007 Apr 14; epub. Maximum flow rate, average flow rate, flow time, and voiding time are properly assessed by the large part of urodynamists. Flow curves from healthy men or from patients with urethral stricture or benign prostatic obstruction are easily recognizable, but only long experience and daily practice may make the difference in the assessment of uroflowmetry curves.

Opening vesical pressure: a new test to discriminate urethral sphincter deficiency? Salvatore S, Serati M, Khullar V et al. Int Urogynecol J Pelvic Floor Dysfunct. 2007 May 4; epub. Opening vesical pressure is a promising parameter to detect urethral sphincter deficiency.

Weak VLPP and MUCP correlation and their relationship with objective and subjective measures of severity of urinary incontinence. Marion A, Masata J, Pereti E et al. Int Urogynecol J Pelvic Floor Dysfunct. 2007;18:267-71. Water perfusion maximum urethral closure (MUCP) pressure measures urethral resistance at rest and Valsalva leak-point pressure (VLPP) measures urethral resistance during increased intra-abdominal pressure (Valsalva maneuver). There is no correlation between these parameters.

Uroassessment of pelvic organ prolapse: the relationship between prolapse severity and symptoms. Dietz HP, Lekschulchai O. Ultrasound Obstet Gynecol. 2007; Apr 30; epub. To define whether a certain degree of pelvic organ prolapse is clinically relevant, we performed a retrospective study on 735 women with symptoms of lower urinary tract dysfunction and prolapse. Descent of the bladder to >= 15 mm below the symphysis pubis are strongly associated with symptoms, and these values are proposed as cut-offs for the diagnosis of significant prolapse on the basis of receiver-operating characteristics statistics.

A novel procedure to assess anismus using three-dimensional dynamic anal ultrasonography. Murad-Regadas SM, Regadas FS, Rodrigues LV et al. Colorectal Dis. 2007 Feb;9(2):159-65. The angle between the internal edge of the puborectalis with a vertical line according to the anal canal axis increases in normal individuals and decreases in all patients with anismus during straining. 3D endosonography is a useful method to confirm the anorectal manometric results.

Three-dimensional ultrasound imaging of the levator hiatus in late pregnancy and associations with delivery outcomes. Lanzarone V, Dietz HP, Aust NZ J Obstet Gynecol. 2007;47:176-80. No consistent correlations were found between levator dimensions and delivery modality. However, an inverse correlation was demonstrated between the area of the hiatus, particularly on pelvic floor contraction, and length of total second stage. Levator hiatus dimensions are associated with the length of the second stage of labour. The effect of pelvic floor structures on progress in labour is worth further study.

Anorectal three-dimensional endosonography and anal manometry in assessing anterior rectocele in women: a new pathogenesis concept and the basic surgical principle. Regadas FS, Murad-Regadas SM, Wexner SD et al. Colorectal Dis. 2007;9:80-5. The anatomy of the anal canal, the anorectal junction and the lower rectum was studied with 3-D ultrasound in 17 women with normal bowel transit, without rectocele (group 1) and 17 female patients with a large anterior rectocele (group 2). In group 1, the anterior upper anal canal wall in normal females was an extension of the rectal wall and the circular muscle was thicker in the mid-anal canal to form the internal anal sphincter (IAS). In group 2 the wall layers were not identified and the IAS was found to be more distal. Obstetric trauma does not seem to play any role in rectocele pathogenesis because the anal sphincter muscles are anatomically and functionally normal and rectocele is also present in nulliparous and in women with caesarian sections. It seems that it is associated with the absence of external sphincter and thinner IAS in the anterior upper anal canal. Herniation starts at the upper anal canal extending to the lower rectum in high or large rectoceles and maybe produced by rectal intussusception because of excessive and prolonged straining during defecation. The denomination ‘rectocele’ should be changed to ‘anorectocele’.

4 – PROLAPSES


Laparoscopic ventral rectal defect, posterior colporrhaphy and vaginal sacrocolpopexy for the treatment of recto-genital prolapse and mechanical outlet obstruction. Slavk S, Soulsby R, Carter H et al. Colorectal Dis. 2007 May 10; epub. Whilst trans-abdominal fixation +/- resection offers better functional results and lower recurrence than perineal procedures, mesh rectopexy is complicated by constipation. Eighty patients, six males, median age 59 years (range 31-90) underwent laparoscopic prolapse surgery between 1997 and 2005; 55% had full thickness prolapse and 46% rectal intussusception, 5 a solitary rectal ulcer. A total of 58% had undergone previous surgery (hysterectomy, posterior colporrhaphy, posterior rectocele, Delorme’s rectal mucosectomy and Burch colposuspension). Half were incontinent (mean Wexner score 11, range 2-17). Laparoscopic ventral rectopexy is safe with relatively low morbidity. In the medium-term, it provides good results for prolapse and associated symptoms of incontinence and obstructed defecation.

Vaginal sacrosphinuous colpopexy and laparoscopic sacral colpopexy for vaginal vault prolapse. Mariczekievicz J, Kjollesdal M, Engkh ME et al. Acta Obstet Gynecol Scand. 2007;86:733-8. The present study compares the peroperative course and long-term results of vaginal sacrosphinuous colpopexy (VSC) and laparoscopic sacral colpopexy (LSC) in 111 patients with a median follow-up 3 years. There was no recurrence in either group, with a similar subjective success rate of 80%. The LSC requires a longer operating time.

Perioperative complications in abdominal sacropexy and vaginal sacrosphinuous ligament fixation procedures. Demirci F, Ozdemir I, Somunkiran A et al. Int Urogynecol J Pelvic Floor Dysfunct. 2007;18:257-61 Abdominal sacropexy (20 sacrohysteropy and 25 sacrosphinuous) had a higher rate of perioperative complications (during surgery or the first 6 weeks): 1 bladder injury, 4 hemorrhages, 3 wound dehiscences, compared to the vaginal group (60 patients): 1 rectal injury and 1 postoperative vaginal vault infection. The hospital stay and operating time was longer with the abdominal procedure.

Infracoccygeal sacropexy, Foote AJ, Ralph J, Aust N, J Obstet Gynaecol. 2007;47:250-1. With infracoccygeal sacropexy in 52 women with vault prolapse there was a mesh erosion incidence of 21.1% at a mean of 20 weeks. This is higher than the rates for single-filament meshes used for suburethral slings. Multifilament meshes should not be used due to the high erosion rate.

Stapled Transanal Rectal Resection (Starr) to Reverse the Anatomic Disorders of Pelvic Floor Dysynergia. Pechllivandes G, Tsiaousis J, Athanasakis E et al. World J Surg. 2007 Apr 25; epub. In 16 patients (13 female) subjected to the Starr procedure for obstructive defecation, symptoms remained unaffected in seven, disappeared in three and improved significantly in the remaining six. The seven failures showed anismus at manometry and had biofeedback treatment with satisfactory results in 5. Starr restores anatomy. Additional biofeedback treatment is usually necessary for further functional improvement. Failure may be the result of other coexisting anatomic and functional abnormalities of the pelvic floor.

Persistent symptoms of functional outlet obstruction after rectocele repair. Puigdollers A, Fernandes-Fraga X, Azpilicueta F. Colorectal Dis. 2007;9:262-5. To determine the real effect of rectocele repair on symptoms of constipation, 35 women operated for rectocele repair (11 transanal approach and 24 transperineal), before and after 1 year were evaluated for straining, sensation of anal blockage and of incomplete evacuation, digitation, stool consistency and stool frequency. The incidence of all symptoms significantly improved, however only 15 patients became asymptomatic. Neither parity nor the type of surgical approach was related to the response to treatment. In eight patients who had a previous hysterectomy the result was significantly worse. This suggests that these symptoms are related to an underlying dysfunction.

5 – RETENTIONS

Has the true prevalence of voiding difficulty in urogynecology patients been underestimated? Haylen BT, Krishnan S, Schulz S et al. Int Urogynecol J Pelvic Floor Dysfunct. 2007;18:53-6. The aim of this study is to determine the true prevalence and associations of voiding difficulty using a validated definition (urine flow rate under 10th centile of the Liverporp Nomograms and/or residual urine volume (by transvaginal ultrasound) more than 30 ml). In 592 women referred for an initial urogynecological assessment the prevalence of voiding difficulty was 39%, far higher than previous estimates. It is the third most common urodynamic diagnosis behind urodynamic stress incontinence (USI-72%) and ureteric/vaginal prolapse (61%) and ahead of the overactive bladder (13%). Voiding difficulty significantly increased in prevalence with age and increasing grades of all types of ureteric/vaginal prolapse. Prolapse appeared to be the main factor in the age deterioration. Other significant relationships with voiding difficulty were prior hysterectomy and continent surgery, whilst USI and the symptom and sign of stress incontinence had significant inverse relationships.

Sacral neuronomodulation for nonobstructive urinary retention: Is success predictable? Goh M, Diokno AC. J Urol. 2007 May 11; epub. We investigated whether there are factors which can predict successful stage II (permanent) sacral nerve stimulator implantation for patients with nonobstructive urinary retention. A total of 29 patients (15 men) completed a 3-day voiding log followed by test stimulation for 2-weeks. Those who experienced 50% improvement in void volume and/or catheterization frequency underwent permanent implantation. We reviewed patient charts with respect to age, sex, duration of retention, underlying diagnosis for retention and voiding ability. Pre-implantation ability to void predicts success of first stage test stimulation.

Sacral nerve stimulation induces pan-colonic propagating pressure waves and increases defecation frequency in patients with slow-transit constipation. Diming PG, Fuentelba SE, Kennedy ML et al. Colorectal Dis. 2007;9:123-32. In eight patients with scintigraphically confirmed slow-transit constipation electrical stimulation to S3 significantly increased pan-colonic antegrade propagating sequence (PS) frequency (5.4 +/- 4.2 vs 11.3 +/- 6.6 PS/h; P<0.01). Stimulation at S2 significantly increased retrograde PSs (basal 2.6 +/- 1.8 vs SNS 5.6 +/- 4.8 PS/h; P=0.03). During the subsequent three-week trial (continuous stimulation), six of eight reported increased bowel frequency with a reduction in laxative usage.

Recommendations on chronic constipation (including constipation associated with irritable bowel syndrome) treatment. Pare P, Bridges R, Champion MC et al. Can J Gastroenterol. 2007;21 Suppl B:2B-22B. The nature of the underlying pathophysiology for constipation is often unclear, and it can be often for physicians to decide on an appropriate treatment strategy for the individual patient. The myriad of treatment options available can be confusing; thus, the main aim of the recommendations from the Canadian Association of Gastroenterology with a treatment algorithm is to optimize the approach in clinical care based on available evidence.

The difficult patient with constipation. Muller-Lisser N, Best Pract Res Clin Gastroenterol. 2007;21:473-84. Difficult patients with constipation mostly suffer for years, have consulted more than one physician and have had some experience with laxatives. The first step should be sorting out what exactly the patient’s problem is. For this purpose technical investigations may be helpful, but the most important measures are a detailed history, symptom analysis and proctological examination. Rarely an underlying and treatable cause of the constipation can be identified.

The PFD continues on page 69
Set-up and statistical validation of a new scoring system for obstructed defaecation syndrome. Altomare DF, Spazzafumo L, Rinaldi M, Dodi G, Ghiselli R, Piloni V. Colorectal Dis. 2007 Apr 18; epub. A disease-specific index to quantify severity to allow assessment of the results of treatment in clinical trials was validated studying 76 patients with obstructed defaecation syndrome (ODS) and 30 healthy controls. The ODS score was the sum of all points with a maximum possible of 31 points. Agreement between two operators, coefficient of repeatability, internal consistency were all evaluated. There was a significant difference between the mean ODS score for patients and controls and cluster analysis on each clinical finding showed a different profile between cluster 1 (a nonhomogenous group including rectocoele, intussusception or perineal descent), and cluster 2 (pelvic dysynergia). The ODS score offers a validated severity of disease index in grading the severity of disease and monitoring the efficacy of therapy.

6 – INCONTINENCES

Burch colposuspension versus fascial sling to reduce urinary stress incontinence. Albo ME, Richter HE, Brubaker L et al. N Engl J Med. 2007;356:2143-55. Among many procedures available for urinary stress incontinence, few randomized clinical trials provide a basis for treatment recommendations. This multicenter randomized trial compares the pubovaginal sling with autologous rectus fascia (n 326) and the Burch colposuspension (n 329) in women with positive stress test and urethral hypermobility, the primary outcomes being negative pad test, no urinary incontinence in a 3-day diary, negative cough and Valsalva stress test. At 24 months success rates were higher for women who underwent the sling procedure, however they had more urinary tract infections, difficulty voiding, and postoperative urge incontinence.


Surgical treatment of stress urinary incontinence using the tension-free vaginal tape-obturator system (TVT-O) technique. Jakimiuk AJ, Maciejewski T, Fritz A et al. Eur J Obstet Gynecol Reprod Biol. 2007 Apr 25; epub. TVT-O surgery was performed in 35 patients followed up for 12 months: total cure was achieved in 42.8%, significant improvement in 17.1%, SUI symptoms abated in 11.4%, no improvement in 20%, and QoL deteriorated in 8.7%. Additional patients should be analysed for a longer period of time.


Early results of immediate repair of obstetric third-degree tears: 65% are completely asymptomatic despite persistent sphincter defects in 61%. Hayes J, Shatari T, Toozs-Hobson P et al. Colorectal Dis. 2007;9:332-6. A total of 121 women who had immediate repair of obstetric third-degree tears underwent interview, anal ultrasonography and anorectal physiology. Residual defects in the sphincters were associated with a significantly higher incidence of abnormal resting and squeeze anal pressures. Anal manometry had no correlation with symptoms. The highest proportion of severe incontinence was in those with internal anal sphincter (IAS) defect alone and when there was a residual IAS and external anal sphincter (EAS) defect. Only 5% with intact sphincters had severe incontinence and only 18% with a residual EAS defect alone had severe incontinence. These results indicate a good outcome following immediate repair of third-degree obstetric tears and emphasize the role of the IAS in continence.

Faecal incontinence in male patients. Kim T, Chae G, Chung SS et al. Colorectal Dis. 2007 May 10; e pub. In a total of 404 males the most common prior diagnosis in patients <70 years of age (group A) was perianal sepsis and symptomatic haemorrhoids; in patients >/=70 years (group B) it was prostate cancer, symptomatic haemorrhoids and neurological diseases. The most common prior procedure in group A was restorative proctectomy/proctocolectomy, fistulotomy or haemorrhoidectomy. In group B radiation therapy for prostate cancer and haemorrhoidectomy.

7 – PAIN

Symptoms suggestive of chronic pelvic pain syndrome in an urban population: prevalence and associations with lower urinary tract symptoms and erectile function. Marszalek M, Wehrberger C, Hochreiter W et al. J Urol. 2007;177:1815-9. The prevalence of symptoms suggestive of chronic pelvic pain syndrome in a cohort of 1,765 men with a mean age of 46.3 years participating in a health screening project was 2.7% and it revealed no age dependence. Chronic pelvic pain syndrome has a negative impact on erectile function.

The mast cell in interstitial cystitis: role in pathophysiology and pathogenesis. Sant GR, Kempuraj D, Marchand JE, Theoharides TC. Urology. 2007;69(4 Suppl):S34-40. Identifying the patients with interstitial cystitis who have mast cell proliferation and activation, enables to address this aspect of disease pathophysiology, and with targeted pharmacotherapy to inhibit mast cell activation and mediator release.

The role of the urinary epithelium in the pathogenesis of interstitial cystitis/prostatitis/urethritis. Parsons CL. Urology. 2007;69(4 Suppl):S9-S16. The urothelium plays a pivotal role as a barrier between urine and the underlying bladder. The bioactive ligand of bladder surface mucus that imparts this barrier function is generated by the highly anionic polysaccharide components (eg, glycosaminoglycans), which are extremely hydrophilic and trap water at the outer layer of the umbrella cell. This trapped water forms a barrier. The result is a highly impermeable urothelium. In interstitial cystitis (IC), disruption of the urothelial barrier may initiate a cascade of events in the bladder, leading to symptoms and disease. Heparinoids can restore the barrier function and treat IC. Groups of patients who have been given a diagnosis of IC, chronic prostatitis, and urethritis have been shown to have IC by virtue of their shared potassium sensitivity. A name such as lower urinary dysfunctional epithelium would incorporate all of these diseases under a single pathophysiologic process.

Bladder defense molecules, urothelial differentiation, urinary biomarkers, and interstitial cystitis. Hurst RE, Moldwin RM, Mulholland SG. Urology. 2007;69 (4 Suppl):S17-23. The urothelium involves an aberrant differentiation program in the bladder urothelium that leads to altered synthesis of several proteoglycans, cell adhesion and tight junction proteins, and bacterial defense molecules such as GP51. These findings lend support to the rationale for glycosaminoglycan replacement therapy.

Effect of test order on sensitivity in vulvodynia. Reed BD, Sen A, Gracely RH. J Reprod Med. 2007;52:199-206. The order of testing at vulvar and peripheral sites (thumb) has little impact on the results of pressure-responsive sensitivity testing among women with and without vulvodynia.

Thermal and visceral hypersensitivity in irritable bowel syndrome patients with and without fibromyalgia. Mosheribe B, Price DD, Robinson ME et al. Clin J Pain. 2007;23:323-330. Irritable bowel syndrome (IBS) is a chronic gastrointestinal disorder with visceral and somatic hyperalgesia, producing a similar effect seen with the central hypersensitivity mechanism in fibromyalgia (FM). FM+IBS patients show greater thermal hypersensitivity compared with IBS patients. However IBS patients exhibit higher pain ratings to rectal distension compared with FM+IBS patients. This data suggests that regions of primary and secondary hyperalgesia are dependent on the primary pain complaint.

Increased colonic pain sensitivity in irritable bowel syndrome is the result of an increased tendency to report pain rather than increased neurosensory sensitivity. Dorn SD, Pulssohn OS, Thiwan SI et al. Gut. 2007 May 4; epub.
8 – FISTULAE

Spontaneous closure of vesicovaginal fistulas after bladder drainage alone: review of the evidence. Bazi T. Int Urogynecol J Pelvic Floor Dysfunct. 2007;18:329-33. A vesicovaginal fistula may occur as a surgical complication, the result of obstructed labor, or a late manifestation of radiotherapy. Surgical treatment includes many routes and techniques, with a success rate reaching 100%. The spontaneous closure of vesicovaginal fistulae following bladder drainage alone for varying periods has been reported by many, but the factors favoring the success of this conservative method have not been well examined and no solid conclusion regarding management recommendations can be drawn.

Benign rectovaginal fistulas: management and results of a personal series. Devesa JM, Devesa M, Velasco GR et al. Tech Coloproctol. 2007 May 25; epub. In 46 cases surgical techniques included endorectal or vaginal advancement flaps, fistulectomy and sphincteroplasty, vaginal/rectal closure and epiploplasty, restorative proctectomy and restorative proctocolectomy. In 20 patients, a diverting stoma was performed as a single procedure or concomitant to the curative attempt. Overall 85% treated for cure healed, including all simple fistulas and 20 complex fistulas (8 iatrogenic, 3 actinic, 2 ulcerative colitis without restorative proctocolectomy; 5 pouch vaginal; 1 septic; 1 Crohn’s disease).

Recto-urethral fistula following brachytherapy for localized prostate cancer. Shakespeare D, Mitchell DM, Carey BM et al. Colorectal Dis. 2007;9:328-31. The incidence of recto-urethral fistula (RUF) is low. RUF following prostate brachytherapy has been associated with rectal biopsy in previous series and this is confirmed in our report. Gastrointestinal specialists should not perform biopsy of the anterior rectum in patients who have had brachytherapy unless there is a very high clinical suspicion of malignancy.

Late results of treatment of anal fistulas. Sygut A, Zajdel R, Kedzio-Budziewska R et al. Colorectal Dis. 2007;9:151-8. The aim of this paper is to analyse the results of treatment of anal fistulas retrospectively. The complication rate was 10-fold higher in patients presenting with a recurrent fistula than in those with primary fistulas and threefold higher in patients with multi-tract fistulas than in those with single-tract fistulas.

Anal Sphincter Advancement Flap for Low Transsphincteric Anal Fistula. Chew SS, Adams WJ. Dis Colon Rectum. 2007 Apr 27; epub. A new technique proposes the use of the distal part of the anal sphincter as an advancement flap to cover the internal opening and thereby effect a cure.

9 – BEHAVIOUR, PSYCHOLOGY, SEXOLOGY

Interstitial cystitis and female sexual dysfunction. Ottem DP, Carr LK, Perks AE, Lee P, Teichman JM. Urology. 2007;69:608-10. Female patients with interstitial cystitis/painful bladder syndrome have sexual dysfunction, including pain. Female Sexual Function Index Pelvic Pain and Urgency/Frequency Questionnaire scores are considered.

Erectile dysfunction. Wessells H, Joyce GF, Wise M, Wilt TJ. J Urol. 2007;177:1675-81. Erectile dysfunction is self-reported by almost 1 of 5 men and it increases with age. Accurate estimates of economic cost will require better understanding of pathogenesis, treatment seeking behaviour, patient preference for therapies, success of treatments and relative satisfaction with oral pharmacotherapy and penile implants.

10 – MISCELLANEOUS


The utility of magnetic resonance imaging for diagnosis and surgical planning before transvaginal periurethral diverticulectomy in women. Foster RT, Amundsen CL, Webster GD. Int Urogynecol J Pelvic Floor Dysfunct. 2007;18:315-9. The use of MR imaging allowed for accurate diagnosis and improved surgical planning: 26 women were treated with periurethral diverticulectomy, one with cystourethrectomy.