

proctography images. Joint mobility was assessed using the validated Beighton score. A score of 4 or greater is significant for joint hypermobility.

**Results:** Forty-eight female patients were included, the mean age was 58.4 years (range 22–78 years.) The mean Beighton score was 1.5 (range 0–6); nine patients had a score of 4 or greater. A Pearson correlation coefficient did not demonstrate a positive correlation between perineal descent and joint mobility ( $-0.10$ ,  $P$  value =  $0.47$ .)

**Conclusion:** This study does not show a greater degree of perineal descent in patients with mobile joints. Multiple factors may contribute to the development of perineal descent; the pathophysiology of this finding remains unknown.

## P208

### Peripheral neuromodulation via posterior tibial nerve stimulation (ptns) as treatment for faecal incontinence – initial experience

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**Aim:** Neuromodulation therapy via sacral nerve for faecal incontinence (FI) seems to be effective, but expensive. Posterior tibial nerve could be a option, as it has been shown to be effective in stress urinary incontinence, but there is not enough evidence for its use in FI.

**Method:** Fifteen women were treated with PTNS [average age 54.06; (35–75)]. Five patients had previous sphincter repair. All patients are evaluated previously with defecation diary, Wexner FI severity score and faecal incontinence quality of life questionnaire (FIQL), endoluminal ultrasound and anorectal manometry, as well as detailed anamnesis. PTNS was performed on a weekly basis for 12 weeks with 30 min duration times, and after follow up evaluation, treatment continued every 2 weeks on a further 12 occasions. During treatment, patients were requested to complete a daily defecation diary.

**Results:** After the first phase, improvement in continence was found in eight of 11 patients. Four patients are still in 1st phase. Two patients discontinued treatment because of an absence of response. Two patients have finished treatment with improvement of symptoms. FIQL scales were improved globally in each domain, except that of embarrassment. Wexner score changed from a mean 16.25 at baseline to 7.2 after 24 sessions.

**Conclusion:** PTNS results in improvement of FI with a minimally invasive modality. Larger trials and long-term follow-up are needed.

## P209

### Anal acoustic reflectometry: a novel technique in the evaluation of male patients with faecal leakage

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**Aim:** A particular subgroup of incontinent males, in whom the pathophysiology remains unclear, will complain of faecal leakage particularly after defaecation. Anal acoustic reflectometry (AAR) is a novel technique providing a dynamic physiological assessment of anal sphincter function, allowing the following parameters to be determined: Opening Pressure, Opening Elastance, Closing Pressure, Closing Elastance, and Hysteresis. The aim was to compare assessment with AAR and conventional manometry in a group of male 'leakers' versus a group of continent males.

**Method:** Male patients with faecal leakage ( $n = 13$ ) were compared with an age-matched group of continent males ( $n = 13$ ). Subjects underwent assessment with AAR followed by manometry in the left lateral position.

**Results:** The acoustic parameters of Opening and Closing Pressure were significantly lower in those patients with faecal leakage compared with normal males ( $42.7$  vs  $64.6$  cm H<sub>2</sub>O,  $P < 0.05$  and  $31.5$  vs  $63.8$  cm H<sub>2</sub>O,  $P < 0.01$  respectively). No significant difference was seen with manometry.

**Conclusion:** The results suggest that, in anal 'leakers' the ability of the anal sphincter to remain closed against an increasing pressure and to return to its closed form following defaecation are impaired, allowing seepage of stool. In contrast to manometry, AAR may be sensitive to discriminate 'leakers' from continent males.

## P210

### Intraoperative neuromonitoring (IONM) in pelvic surgery – new scopes of application

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**Aim:** To open up potential scopes of application for a newly developed IONM method enabling simultaneous assessment of bladder and internal anal sphincter (IAS) innervation.

**Method:** Eight patients with different indications for pelvic surgery [one with low anterior resection (LAR) for rectal cancer, one with abdomino-perineal excision (APE) for ultra-low rectal tumour, two with open and laparoscopic mesorectal dissection for presacral tumour excision, two with sacral nerve stimulation (SNS) for anorectal and urinary dysfunction and two with laparoscopic resection rectopexy (LRR) for rectal prolapse] underwent IONM with simultaneous observation of bladder manometry and electromyography of IAS.

**Results:** IONM confirmed intact innervation in patients undergoing LAR, laparoscopic mesorectal dissection and LAR. A continuous IONM was achieved in the patient undergoing LAR. The patient who was scheduled for APE had positive IONM results after mesorectal dissection leading to the decision to perform a sphincter-saving procedure. Follow up (FU) demonstrated good anorectal and urinary function. In patients treated with SNS, IONM enabled guidance and positioning of the SNS electrodes near nerve fibers allowing simultaneous activation of external anal sphincter and IAS and bladder. FU demonstrated an improved functional outcome.

**Conclusion:** The newly developed IONM method offers a variety of applications.

## P211

### Obstructed defecation and pelvic floor descent – internal Delorme procedure in a day surgery practice

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**Aim:** Obstructed defecation is serious problem in patients with constipation. The main problem is internal rectal prolapse. Different techniques are used for correction. We performed Delorme and

internal Delorme procedure for total and internal rectal prolapse. Internal prolapse was confirmed clinically and by defecography. ASA criteria and principals of day surgery practice were observed.

**Method:** Thirty female patients (age 40–88 years, average 68.6 years), with different stage of rectal prolapse, were treated in a day surgery unit under epidural anaesthesia. Follow up was from 1 to 24 months.

**Results:** Postoperative stay was from 5 to 9 hours. We carefully followed the patients at home (pain, defecation, pain post defecation, blood on the stool, urinary function and other documented complications). Pain was adequately treated with Nalgesin (NSAD) and paracetamol. Anal stenosis was noted in fourteen cases and was treated with anal dilators (Dilatan – Sapimed) or operatively with incision or dilatation under anaesthesia.

**Conclusion:** Delorme and internal Delorme – intraanal mucosectomy, is a safe and effective surgical treatment for complete or internal rectal prolapse. The procedure may be safely performed in a day surgery unit, on patients with reasonable medical comorbidities and in relatively old age.

## P212

### Sacral nerve stimulation for refractory constipation: a useful option

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**Aim:** Election of the best treatment for severe constipation is difficult. The aim of this study was to evaluate our experience with sacral nerve stimulation (SNS) on refractory constipation.

**Method:** Patients who failed conservative treatment underwent 3 weeks test stimulation. All had increased colonic transit time with absence of anorectal dyssynergism on defecography. Patients with > 50% improvements in symptoms underwent permanent neurostimulator implantation.

**Results:** Nine females (median age 37 years) underwent test stimulation, of whom 6 (67%) proceeded to permanent stimulation. After a median 23 (range 4–30) months follow-up the Cleveland constipation score decreased from 19 to 9 ( $P < 0.05$ ). After the first 3–6 months, loss of efficacy was noted in four patients. These adverse events were resolved by reprogramming the device in two patients.

**Conclusion:** SNS has acceptable efficacy (4/9, 44%) and seems to be a useful option in the treatment of refractory constipation.

## P213

### Surgical treatment of adult Hirschsprung and idiopathic megacolon/megarectum

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**Aim:** Surgical treatment of refractory constipation is unsatisfactory. However a surgical option is necessary in adult Hirschsprung or in idiopathic megacolon of long-standing severe constipation and the aim of this study was to evaluate the surgical outcome for these cases.

**Method:** Between 1990 and 2010, 3 adult Hirschsprung (median age 22 years) were treated by restorative proctocolectomy (2) and rectosigmoid excision with coloanal anastomosis (CA, 1) and 11 idiopathic megacolon/megarectum (median age 47 years) treated by total colectomy (10) and CA (1). The outcome of last clinic was recorded as good, fair or unfair and was evaluated the Cleveland constipation score before and after the procedure.

**Results:** With a median follow-up of 71 months, 9 (64%) patients had good outcome and 5 (36%) fair, due to intermittent symptoms of sub-obstruction, pain, obstructive defecation and incontinence. The median Cleveland constipation score decreased from 20 to 5 ( $P < 0.01$ ).

**Conclusion:** Surgery is the appropriate approach for adult Hirschsprung and idiopathic megacolon/megarectum for long-standing severe constipation.

## P214

### Peristeen anal irrigation in the management of faecal incontinence

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**Aim:** Peristeen anal irrigation is an innovative management of faecal incontinence by washout of the distal large bowel with warm tap water using a rectal catheter. The aim of the study was to evaluate the effectiveness of the technique both in terms of the symptomatic control and assessment of the quality of life.

**Method:** The study included 17 consecutive patients (seven men, 10 women; median age 51 years, range 5–72 years) suffering with faecal incontinence of various aetiology. All patients were unable to control the symptom conservatively by pads, anal plugs and constipating agents and were not prepared to accept invasive surgical treatment. The outcome was assessed symptomatically and by comparing scores of faecal incontinence and quality of life before and after the treatment.

**Results:** Peristeen anal irrigation helped to achieve control of faecal incontinence in 13 (76%) patients. In the remaining 4 (24%) patient improvement was regarded as partial due occasional technical failure of administration (burst balloon) or patients' subjective incomplete satisfaction. Comparison of scores of faecal incontinence and the quality of life showed significant improvement.

**Conclusion:** Peristeen anal irrigation is a safe and successful method of management of faecal incontinence in well-motivated patients.

## P215

### Long-term results of anal function after intersphincteric resection for low rectal cancer

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**Aim:** Recently, Intersphincteric resection (ISR) has been widely recognized as an innovative surgery. However, there are few reports regarding long term results of anal function after ISR. The aim of this study was to assess the long-term functional outcomes following ISR.

**Method:** A functional questionnaire was sent to alive patients and without recurrence who underwent curative ISR between February 2000 and March 2006. Those answers were evaluated using the Faecal Incontinence Severity Index [Wexner's Score (WS)] at 2 and over 5 years after operation were investigated. These were also assessed according to operation types (partial, subtotal, total), and with or without preoperative chemoradiation (CRT).

**Results:** Among 52 available patients, 42 patients responded to the questionnaire. Mean WS was 9.0 at 2 years postoperatively, and 7.0 at over 5 years ( $P < 0.05$ ). There were no significant differences in WS of each types of operation. There were significant differences in WS between patients with CRT