

## MINI-INVASIVE POSTERIOR SACROSPINOUS LIGAMENT FIXATION USING THE CAPIO™ NEEDLE DRIVER: AN ANATOMICAL STUDY

Qouzaid I.<sup>1</sup>, De Tayrac R.<sup>2</sup>, Ben Rouma S.<sup>3</sup>, Costa P.<sup>4</sup>, Prudhomme M.<sup>5</sup>, Delmas V.<sup>6</sup>

<sup>1</sup>Hospital Bichat-Claude-Bernard, Dept. of Urology, Paris, France, <sup>2</sup>CHU Carémeau, Dept. of Gynecology, Nîmes, France, <sup>3</sup>Hopital Bichat-Claude-Bernard, Dept. of Urology, Paris, France, <sup>4</sup>CHU Carémeau, Dept. of Urology, Nîmes, France, <sup>5</sup>Faculté De Médecine, Laboratoire D'anatomie, Montpellier-Nîmes, France, <sup>6</sup>Hospital Bichat-Claude-Bernard, Faculté De Medecine Paris Descartes, Dept. of Urology et Laboratoire D'Anatomie Ufr Des Saints-Pères, Paris, France

**Introduction & Objectives:** Posterior sacrospinous ligament fixation is an effective treatment of pelvic organ prolapse by vaginal route. A mini-invasive technique aims to simplify the procedure by reducing dissection. Our objective is to study anatomical risks after posterior sacrospinous ligament fixation using the Capiro™ needle driver. Currently, there is no data on anatomical position of the fixation.

**Material & Methods:** A simplified bilateral posterior sacrospinous ligament (SSL) fixation was performed on seven fresh female cadavers using the Capiro™ (Boston Scientific) needle driver. Cadavers were installed in gynaecologic position. Posterior sacrospinous ligament fixations were performed after a posterior vaginal wall incision on the midline and a simplified dissection of both pararectal fossae. Then, we have performed a postero-lateral pelvic side wall dissection, after open pelvic surgery and organs removal. We measured the distance between the neurovascular elements adjacent to the SSL from the suture site.

**Results:** Thirteen sacrospinous ligaments (SSL) were available for analysis. Mean length (+/-SD) of SSL was 51.0 +/-9.2mm and mean width at the level of fixation (+/-SD) was 23.5 +/-5.7mm. No rectal injury was observed. Fixations were in the SSL in all cases, but reached the deeper part of the SSL in 8/13 cases (61%). Mean distance between fixation and ischial spine was 21.6 mm (range 13 to 30). Mean distance between fixation and pudendal nerve and sciatic nerve were 16.1 mm (range 4 to 32) and 16.5 mm (range 2 to 27), respectively. No difference was observed between right and left side.

**Conclusions:** Mini invasive posterior sacrospinous ligament fixation using the Capiro™ needle driver seems to be reproducible with low anatomical risks. However, the fixation should be at least at 20 mm medially to the ischial spine in order to reduce neurological risks.

## LONG-TERM FOLLOW-UP OF UTERUS SPARING SURGERY FOR PELVIC ORGAN PROLAPSE (POP)

Costantini E., Lazzeri M., Zucchi A., Mearini L., Del Zingaro M., Porena M.

University of Perugia, Dept. of Urology, Perugia, Italy

**Introduction & Objectives:** At present, concomitant hysterectomy and repair of pelvic support defects is considered the standard option for pelvic organ prolapse (POP) involving the uterus. The few reports on uro-genital prolapse repair associated with uterus preservation generally present short follow-ups and vague outcome measures. Here, we report the long-term follow-up of our experience in uterus sparing surgery, performed at our tertiary Urogynecological Department.

**Material & Methods:** Forty-seven patients with symptomatic POP underwent uterus sparing surgery: 40 abdominal hysterocolposacropexy (HSP) and 7 laparoscopic (LHSP). Patients underwent an accurate preoperative evaluation. All patients were followed-up for 1, 3, 6 and 12 months postoperatively and then annually. Outcomes were assessed objectively and subjectively using a symptoms investigation, anatomical/physical examination, patient questionnaires and urodynamic tests. Objective success was defined as the cervix and/or vaginal apex remaining well supported >6 cm above the hymen plane and no vaginal prolapse greater than or equal to grade 2 at any vaginal site while the patient performed Valsalva's maneuver. Subjective success was absence of symptoms related to prolapse or incontinence. Patient satisfaction was defined by replies to questions as to whether the patient was satisfied with the operation and would they repeat it.

**Results:** The mean follow-up was 60.7 months (range of 12-141 months). Anatomical outcome showed anterior compartment prolapse (cystocele)  $\geq 2$  in 6/47 patients (12.76%), while posterior compartment prolapse (rectocele)  $\geq 2$  was present in 4/47 patients (8.51%). However no one required a further surgery to correct the recurrence. Post-operative voiding symptoms persisted in 3/33 (6.38%) patients, post-operative storage symptoms persisted in 6/32 (18.75%) patients. Two patients reported de novo urgency. Sexual activity was maintained in 28/29 (95.5%) patients. Four patients showed de novo urinary incontinence (3 # stress urinary incontinence -SUI, and 1 # urgency incontinence -UI). Thirty-nine of 47 patients (82.97%) were satisfied. No one develop pelvic neoplasms.

**Conclusions:** Long-term follow-up showed that uterus sparing surgery seems to be feasible and safe in women who wants to preserve the integrity of vaginal function and to be satisfied with their self image of body. We should always advise them about the risks of pregnancy and delivery and the need for a long-term follow-up to rule out malignant disease.

## VESICOVAGINAL FISTULA INCREASING PROBLEM IN DEVELOPING WORLD

Abdullah A.<sup>1</sup>, Syed S.<sup>2</sup>

<sup>1</sup>Liaquat National Hospital, Dept. of Urology, Karachi, Pakistan, <sup>2</sup>Khoori Goth Fistula Hospital, Dept. of Obgyn, Karachi, Pakistan

**Introduction & Objectives:** Uro genital fistula is still a major problem in developing world. This is directly attributed to poor socioeconomic conditions and lack of ante natal care. Prevalance is around 2 million women. Unfortunately Pakistan has large number of cases. Our data shows shift of etiology from maternal causes to gynecological causes.

**Material & Methods:** A retrospective study of 355 patients with different types of urogenital fistulae treated by the authors during the period from January 2005 to Dec 2007 is presented. 300 cases had a vesicovaginal fistula of which 160 were repaired vaginally and 140 were repaired abdominally. The remaining fistulae were as follows: 14 unilateral ureterovaginal fistulae, 11 ureterovesicovaginal fistulae (one bilateral), and 28 vesicouterine fistulae. All were repaired abdominally except for 9 patient with vesicovaginal fistula needing continent urinary diversion with neobladder and two under went ureterosigmoidostomy. 4 patients had urethrovaginal fistulae for which Mitroffnof procedure was done. 10% patients were redo from previous attempts by other surgeons.

**Results:** Majority of fistulae 66% were due to neglected obstructed labor while 34% were iatrogenic. The iatrogenic causes were gynecologically related in (57%) patients and obstetrically related in (41%) cases. There were (9%) failed repairs in the vesicovaginal cases, were salvaged by a secondary surgery.

**Conclusions:** Prevention of fistula should be ultimate goal. Uro genital fistula should be treated by people with appropriate training.

## URETHRAL DIVERTICULA: DIAGNOSIS AND TREATMENT

Kasyan G.R., Pushkar D.U., Anisimov A.V.

Moscow State Medical University, Dept. of Urology, Moscow, Russia

**Introduction & Objectives:** The aim of the study is to analyze the role of additional investigations, like MRI, in patients with urethral diverticulae when the diagnosis is not clear with routine examinations.

**Material & Methods:** The study included 73 patients with urethral diverticulae. The mean age of these patients was 33.7 years. An average period of time from diagnosing to hospitalization was 8.2 months. The main complaints of the patients related to diverticulae are included in the table below.

Symptoms	
Palpable mass in vagina	74%
Recurrent urinary tract infection	48%
Frequency	42%
Urethral discharge	14%
Dyspareunia	13%
Urinary incontinence	9%

Table 1. The reasons for referring to Urology Clinic in female patients with urethral diverticulae

**Results:** In 3 cases from 73 (4.1%) we have met a rare condition that is giant urethral diverticulae. The size of diverticula does not allow differentiating it from the cystocele or bladder diverticula with physical exam only. In 3 patients (4.1%) we found multiple diverticulae on Usound examination. Usound followed by MRI was utilized in 15 patients suffering urethral diverticulae. In 7 patients from 15 we have used endorectal probe on MRI examinations. These methods allowed us to visualize the diverticula and confirm the diagnosis. In all cases when endorectal MRI was utilized, we have found a dislocation of the diverticula due to insertion of endorectal probe. Figure 1: MRI of multiple urethral diverticulae (above); MRI with rectal probe deforms the diverticula (below)

**Conclusions:** Utilization MRI helps to make clear the anatomy of diverticula in selected cases and shows its relationship to urethra and bladder, which is obviously prognostic for planning surgery. On the same time we have to emphasize that we were not able to visualize the isthmus between urethra and diverticula on endorectal MRI. MRI with endorectal probe does not give any additional information comparing to standard MRI examination.

