POSTERIOR IVS IN TREATMENT OF ENTEROCOELLE AND POSTERIOR FORNIX SYNDROME

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SUMMARY: Enterocele is a pelvic floor disorder that can lead to posterior fornix syndrome: urgency, frequency, nocturia, pelvic pain, difficulties in emptying the bladder. Posterior IVS is a minimally invasive procedure that offers support of the vaginal vault. The aim of our study was to assess the results of posterior IVS in enterocele and posterior fornix syndrome treatment. Material and method: we evaluated all the enterocele cases treated by this procedure over a period of 2 years. The mictional calendar was completed before and after surgery by all patients. Results: 21 cases were found; we observed complete disappearance of frequency and urgency at 8 (37.4%) patients and significant improvement in 10 (63%) patients; complete disappearance of nocturia in 9 (56%) patients and significant improvement (no more than 2-3 episodes per night) at 6 (37%) patients, and persistence of nocturia at 1 (6%) patient; significant improvement in pelvic pain at all patients. Conclusion: this procedure showed very good outcomes in our study. It is a minimally invasive surgery that allows fast recovery. Some of the patients diagnosed and treated for OAB, may be suffering from a surgically treatable anatomical defect.

Keywords: enterocele, pelvic floor disorder, intra-vaginal sling

Tratamentul enterocelului si sindromului de fornix posterior prin IVS posterior

Rezumat: Enterocelul este o tulburare a staticii pelvine, care din punct de vedere anatomic reprezinta o eversiune a boltei vaginale, iar din punct de vedere fiziologic poate determina sindromul de fornix posterior: imperiozitate miccionala, nicturie, rezidu de urina, durere pelvina. IVS posterior (sacropexia infracoccigeala) este o tehnică minim invaziva, care consta in montarea unei bandelete de polipropilena cu pasaj prin fossele ischiorectale, cu rolul de a reface parțial ligamentele uterosacrate și cardinale și care va susține bolta vaginală. Scopul studiului nostru l-a reprezentat evaluarea efectului terapeutic obținut prin această tehnică. Material și metodă: am evaluat toate cazurile de enterocel operate folosind această tehnică în clinica noastră în ultimii 2 ani. S-a completat calendarul micțional la toate cazurile atât pre- căt și postoperator. Au fost gasite 21 de cazuri de enterocele cu sindrom de fornix posterior, la care s-a practicat sacropexia infracoccigeală; s-a observat postoperator dispariția totală a imperiozității micționale la 8 (37%) cazuri și ameliorare semnificativă în 10 (63%); dispariția nicturiei în 9 (56%) dintre cazuri, ameliorare semnificativa la 6 (37%) dintre paciente și persistența nocturiei la un singur caz. Concluzii: studiul nostru a arătat că tehnică este eficientă, fiind în același timp o procedură minim invazivă. Unele dintre paciențele diagnosticate și tratate pentru hiperreactivitatea de detrusor vezical, suferă de fapt de un defect anatomic corectabil chirurgical.

Cuvinte cheie: enterocele, pelvic floor disorder, intra-vaginal sling

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INTRODUCTION:

Enterocele is a pelvic floor disorder that is anatomically represented by a prolapse of the vaginal vault, and clinically can determine a complex of symptoms: urgency, frequency, nocturia, pelvic pain and difficulty in emptying the bladder called posterior fornix syndrome (4,5). No correlation between the size of the enterocele and severity of symptoms has been found so far(3).

Posterior IVS (intravaginal sling) also known as infracoccygeal sacropexy is a minimally invasive procedure, performed by transvaginal route, which consists in inserting a polypropylene mesh, via ischiorectalis fossae that supports the vaginal vault. This tape recreates a part of the uterosacral and cardinal ligaments.

A review of the anatomical landmarks, especially of the suspension system of the vagina, which is the cornerstone of pelvic static disorders, is welcomed. According to De Lancy there are three main levels of suspension of the vagina(2,3).

- Level I: the higher paracolpos, includes the first 2 to 3 cm of the vagina. Suspension at this level is ensured by the continuity of fibers found in uterosacral and cardinal ligaments, fibers opposing the eversion of the vaginal vault. Thus the upper vagina is suspended by a conjunctive cord to the pelvic walls (1,2). Damages at this level are responsible for the posterior fornix syndrome. This is the level that we have to restore in order to cure the enterocele and the posterior fornix syndrome.
- Level II: ensures the suspension of the vagina to the tendinous arch of the endopelvic fascia.
- Level III is provided by the connective fibers that merge with the tendinous center of perineum and perineal membrane. (3)

Thus the vagina is connected to the pelvic walls and levatorial plate, being held tight as a trampoline that supports the bladder base. This is an extremely important aspect, because bladder base is an area with an essential role in triggering micturition. A lack of support in this area will determine a premature reflex of micturition, triggered before the complete filling of the bladder (frequency, urgency).

Technique: For the insertion of the posterior IVS tape a colpotomy under the cervix and dissection of both pararectal spaces is necessary. The ischial spine and sacrospinous ligaments are identified. The passage of the needle must be 2 cm medial to the ischial spine, in order to avoid pudendal artery injury. The tape is inserted, then sutured to the vagina. The edges of the tape are brought out 2-3 cm posteriorly and laterally to the anus.

STUDY OBJECTIVES:

Evaluation of therapeutic effect obtained after surgical treatment of posterior enterocele using polypropylene strip (posterior IVS).

METHOD:

A retrospective study over 2 years (01.2009-01.2011) was performed, all enterocele cases who underwent surgical treatment by posterior IVS insertion were selected.

The following parameters were recorded: personal history (especially obstetrical), the number and type of gynecologic interventions previously suffered by the patient (hysterectomy), past surgical treatment for pelvic floor disorders, if medication for hyperactive bladder was previously prescribed (Vesicare, Driptane, etc.), the duration of hospitalization, evolution after surgery (mictional calendar), if further medical treatment was required postoperatively.

The patients were asked to fill in the mictional calendar for 3 consecutive days before surgery and again after the treatment.

RESULTS

21 patients with enterocele treated by posterior IVS have been found. Of the 21 patients, 14 were with the uterus intact and 7 patients had previous total hysterectomy.

In terms of obstetric history all patients had at least one vaginal birth in history: 8 patients had 3 vaginal deliveries, 9 had 2 vaginal deliveries, and 4 had 1 vaginal delivery.

Transvaginal surgery: 7 patients have been treated for cystocele (anterior colporafy), 5 were previously treated for rectocele (posterior colporafy), 9 had no previous transvaginal surgery.

16 patients were previously diagnosed with overactive bladder and treated by oral medication (Vesicare, Driptane).

During the vaginal exam 8 patients were found with associated cystocele, and 2 patients with stress incontinence.

Pelvic pain was reported by 14 patients.

Assessing the mictional calendar completed by the patients before surgery: 18 patients with frequency and urgency, and 16 patients with nocturia were found.
Assessing the mictional calendar completed by the patients after surgery: we observed complete cure of frequency and urgency at 8 (37.4%) patients, significant improvement in 10 (63%) patients, complete cure of nocturia 9 (56%) patients, significant improvement (no more than 2-3 episodes per night) at 6 (37%) patients, and persistence of nocturia at 1 (6%) patient.

Pelvic pain was not mentioned after surgery by 8 (57%) patients, and the rest of them reported significant improvement.

In terms of postoperative evolution: discharge at 24 h.

DISCUSSIONS

Vaginal vault prolapse with enterocele occurrence can be found both in patients with uterus in place, as well as at those with total hysterectomy.

Total hysterectomy with removal of the cervical ring and damage to the vascularization of the uterosacral ligaments is a risk factor for the occurrence of vaginal vault prolapse(1,3).

Vaginal delivery is also a contributing factor to generate the vaginal vault prolapse(1).

Using mictional calendar is indicated for the accuracy of diagnosis, especially in order to assess frequency, urgency and nocturia.

Some of the patients diagnosed and treated for overactive bladder have surgically treatable anatomical defects.(2,5)

The Integral Theory, issued by Petros, highlights that it is necessary to correct the anatomy in order to restore the function(3).

What is obtained by fitting a posterior IVS in a patient with enterocele and posterior fornix syndrome:
- anchoring the vaginal vault ensures a proper support of the bladder base
- better support of the bladder base avoids triggering premature micturition reflex (no more frequency, urgency and nocturia)
- reconnection of the vaginal vault to the levator plate disappearance of bladder evacuation disorder
- a decrease in the tension of the uterosacral ligaments, that cures the pelvic pain.

Our study showed that posterior IVS is a good option for the treatment of enterocele and posterior fornix syndrome. The technique described is a minimally invasive one, allowing a quick recovery and short hospitalization.

Using the polypropylene mesh for added strength in the restoration of pelvic statics has gained ground lately and it seems a promising solution. It remains to evaluate the importance of vaginal erosion phenomena.

CONCLUSIONS

Filling in the mictional calendar becomes a mandatory step in the evaluation of posterior fornix syndrome.

A detailed history and careful clinical examination can differentiate between OAB and enterocele with posterior fornix syndrome.

Posterior IVS is a minimally invasive technique, whose efficiency comes to reconfirm the Integral Theory of Petros.

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