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URODYNAMIC PROFILE OF ENDOMETRIOSIS PATIENTS

Hypothesis / aims of study

Surgery for deep infiltrating pelvic endometriosis (DIE) may induce urination disorders secondary to the hypogastric nerve plexus injured intraoperatively but patients consulting for this type of pathology often describe functional urinary tract signs before surgery. Fonctionnal low urinary tract symptoms may relate to specific anatomic location of DIE [1]. Furthermore interstitial cystitis and endometriosis may frequently coexist in patients with chronic pelvic pain. The aim of this study was to assess preoperative urodynamic parameters of patients referred for DIE with or without preoperative urinary complaint, and secondly to know what was the anatomical involvement found at surgery.

Study design, materials and methods

A multicentre prospective observational study was conducted between 01/01/2007 and 01/03/2011 on patients consulting for surgical treatment of deep pelvic endometriosis with or without functional urinary disorders. All patients had thorough preoperative evaluation including standardized questionnaire and urodynamics studies. During operation DIE locations were recorded.

Results

30 patients were included in the study. The mean age of patients was 31.7 years (±6.7). On examination, functional urinary disorders were present in 24/30 patients (80%). When present, the symptoms were: urge incontinence in 15/29 cases (51.7%), dysuria in 19/29 cases (65.5%), urinary frequency in 13/29 cases (44.8%) and urge incontinence by leakage in 3/28 cases (10.7%). The conditions most frequently observed in urodynamics were: Increased bladder sensation in 17/30 patients (56.7%), pain during bladder feeling occurred in 13/30 patients (43.3%), urethral hypertonia in 28/30 patients (93.3%).
During surgery, all patients presented, at least a posterior DIE: 16/30 uterosacral ligaments involvement (53.3%), 2/30 rectovaginal septum (6.7%) and 12/30 (40%) of the rectum. Only 4/30 patients (13.3%) had a bladder location. Relation between symptoms, urodynamic condition and location is given in table.

Interpretation of results

There is some overlap between impairment of low urinary tract function by DIE and Bladder Pain Syndrome [2]. This association is rather independent from the presence of a bladder location by DIE. This suggests that the mechanism of pain symptoms may be related to some degree of interrelation between endometriosis implants and the peripheral or central nervous systems, as observed in the rat models [3].

Concluding message

Low urinary tract function is frequently abnormal in patients with DIE. The origin of urinary disorders could be a neurologic mechanism, secondarily to neuropathy, rather than a direct affect bladder.

Table: Low urinary tract symptoms, urodynamic conditions according to DIE location

	Bladder location present	**Bladder location absent**	***p* value**
Symptoms	**n/N (%)**	**n/N (%)**	
Urgency	8/10 (80)	7/19 (36.8)	0.05
Increased daytime frequency	5/10 (50)	8/19 (42.1)	0.71
Dysuria	7/10 (70)	11/19 (57.9)	0.69
Urinary stress incontinence	1/10 (10)	4/19 (21.1)	0.63
Bladder pain	5/10 (50)	5/19 (26.3)	0.24
Urodynamic conditions	**n/N (%)**	**n/N (%)**	
Maximum urine flow rate <15 ml/s	1/10 (10)	6/19 (31.6)	0.37
Painfull bladder filling	7/10 (70)	6/20 (30)	0.06
Detrusor overactivity,	1/10 (10)	1/19 (5.3)	1.0
Maximum cystometric capacity <350 ml	6/10 (60)	9/20 (45)	0.44
Maximum urethral closure pressure > 80 CmH20	9/10 (90)	18/20 (90)	1.0

References
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