

Category No.

14

Ref. No.

290

**Abstract Reproduction Form B-1**

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Title (type in  
CAPITAL  
LETTERS)**FOWLER'S SYNDROME: SOMETHING TO DETECT IN CHRONIC  
"IDIOPATHIC" URINARY RETENTION IN WOMEN**

Abnormal activity of the urethral sphincter prevent an adequate relaxation during voiding phase causing outflow obstruction of the bladder with increased residual volume and eventually failure of the detrusor. Clare J Fowler in 1988, studying electromyographic activity of the sphincter in 57 women with various grade of urinary retention described the presence of associated endocrine symptoms with characteristic signs of the polycystic ovary syndrome.

In this study we analyzed a group of idiopathic retentionist women treated in our department with various methods of electrostimulation to find these abnormal characteristics.

**MATERIALS AND METHODS:**

28 women, age 20-57 years, mean 27, from december 1995 to february 1999 underwent a complete morphofunctional evaluation of the lower urinary tract for voiding dysfunction, complete retention in 22, incomplete in 6. Our trial is a precocious intermittent catheterization to prevent detrusor overdistension, videourodynamic, neurophysiological studies, psychometric test, pelvic ultrasonography and in last 8 cases sphincter ultrasonography.

Videourodynamic showed in all patients acontractility or hypocontractility and in 19 cases an impaired sphincter relaxation during voiding or attempting voiding was found. In 12 of these patients urethral striated sphincter electromyography showed an abnormal activity with the impossibility of spontaneous relaxation. In 11 patients sensibility of the bladder was reduced and absent in three cases (patients with a long history of infection and overdistensions). 20/28 patients underwent intravesical electrostimulation and in 6 cases achieved a good result with a complete voiding in 3 patients and incomplete in 3 patients (1-2 catheterism/day). 18 patients underwent sacral neuromodulation percutaneous test with complete restoring of voiding in 15 patients, with normal urodynamic parameters. Actually 14 patients have a definitive implant with a quadripolar electrode in S3 monolateral and Interstim Medtronic stimulator. In the history of 17 patients characteristic signs of polycystic ovary syndrome were present: ovarian cysts or polycystosis in 17, hirsutism in 8 patients and menstrual irregularity in 7 patients. 11 have an history of long term treatment with cyproterone.

**RESULTS:**

The presence of an impaired detrusor function with a sphincter "spasticity" in association with signs of polycystic ovary syndrome is highly significant in our group ( $p < 0.01$ ) and still significant is the correlation between vesicourethral disorders, endocrine symptoms and good results by means sacral neuromodulation. Women implanted with a definitive stimulator had in all cases sphincter hyperactivity with normal or reduced sensibility of the bladder and 14 patients presented an history of dismenorrhoea. In two cases complete retention appeared after pregnancy. Of the 6 cases which achieved good results by means of intravesical electrostimulation, one had sphincter spasticity and one had an ovarian cyst.

Patients without results neither with intravesical electrostimulation nor with sacral neuromodulation presented an high reduction or the absence of detrusor sensibility; these one did not use precociously intermittent catheterisation.

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**DISCUSSION:**

Abnormal urethral sphincter activity, voiding dysfunction and polycystic ovaries represent, as Doctor Fowler proposed, a syndrome.

An hyperactivity of the sphincter is correlated to an impaired detrusor activity with a mechanism of hyperinhibition. All patients with these characteristics refer an initial difficulty in voiding and later urinary retention. The overlapping infection and overdistension represents the major risk for the integrity of detrusor muscle and precocious intermittent catheterization is recommended to achieve results by means of neuromodulation techniques. Chronic overdistension causes the reduction of bladder sensibility and, when it is absent, results by means of sacral neuromodulation are incomplete or the risk is a not long term results. In this situation intravesical electrostimulation before sacral neuromodulation is recommended because, despite of poor results on voiding, in our experience it increases sensibility of bladder in all cases. Sphincter dysfunction, as proposed, is perhaps related to the relative progesterone deficiency that characterises the polycystic ovarian syndrome: progesterone activity normally stabilises membranes of muscular fibres and this deficiency may impair relaxation of the sphincter. Continuous stimulation of S3 root by mean of an implantable device permits probably a sinergia between detrusor, sphincter and pelvic floor, reducing the hyperinhibition of detrusor.

**CONCLUSIONS:**

The analysis of this group of retentionist women confirm the presence of associated vesico-urethral dysfunctions and endocrine symptoms.

All these characteristic signs must be detected in presence of "idiopathic" retention in women.

Precocious rhythmic voiding of bladder in this situation by intermittent catheterization is the first treatment while the urologist is engaged in the definition of a correct diagnosis.

**REFERENCES**

Clare j Fowler and coll

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