

Cure of childhood urgency incontinence with a midurethral sling

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CASE REPORT

Miss "X", a 21 year old nullipara had a major incontinence problem, since childhood which had failed to respond to any treatment including a "bladder stretch" at 8 years of age. Her main complaint was history of severe incontinence, wetting with urgency, with use of 3-4 menstrual pads per day. Urinary 24 hour diary confirmed this was a severe problem: 11 entries of urgency with micurition, with 5 recorded episodes of involuntary wetting. She also gave a history of stress incontinence, nocturia $\times 1$ per night. She was objectively assessed with a self-administered questionnaire, diary, pad tests, urodynamics, ultrasound, and "simulated operation". There was no urine loss with 10 coughs in the upright position with a bladder volume of 155 ml. 24 hour pad loss was 90.4 gm. Rotation and a bladder base descent of 17.7 mm was measured on straining during transperineal ultrasound. There was no funnelling or urine loss even with repeated coughing or straining. Overactive bladder was diagnosed on urodynamics testing. Residual urine (catheter) was 2 ml. A "simulated operation", was performed to test the diagnosis of congenital pubourethral ligament defect: the patient was examined with a bladder sufficiently full to provoke urgency in the supine position. Unilateral digital pressure at midurethra relieved the sensation of urgency 100%.¹

Risks and benefits were explained to the patient and her mother in detail. A midurethral "tension-free" polypropylene tape was inserted. Immediately after surgery, the patient reported 100% disappearance of her urge incontinence symptoms, and also, her stress incontinence symptoms. On post-operative ultrasound, bladder base descent was 9.2 cm, with no rotation. The patient remained cured at last review 4 years later.

DISCUSSION

This case is of interest on several counts. The patient had a congenital defect, confirmation of a lax pubourethral ligament with a 'simulated operation' (disappearance of urgency with digital midurethral anchoring), surgical cure in the presence of "overactive bladder", and decision to operate in a patient who intended to become pregnant sometime in the future.

The patient was assessed according to the Integral Theory System¹ which states that stress and urgency are mainly caused by ligamentous laxity, a results of damaged collagen/elastin, and this may be congenital.

The diagnosis of congenital pubourethral ligament (PUL) laxity was confirmed with transperineal ultrasound, and by a "simulated operation":¹ disappearance of urge symptoms on reinforcing the site of PUL insertion. Total cure of urgency and stress symptoms appear to validate lax PUL as the cause of symptoms. One significant concern for the patient, her mother (and indeed the surgeon), was to assess whether the proposed surgery would interfere with any future childbearing. Based on the anatomical knowledge of where the tape was placed, what happens to bladder base during labour (it rotates suprapubically), and previous experience,²⁻⁴ I was able to reassure the patient and her mother that problems during pregnancy or labour were unlikely. Surgical cure in the presence of urodynamic "overactive bladder" (OAB) presents a singular validation of the recent Cochrane report,⁵ that the urodynamics OAB has no predictive value in incontinence surgery.

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