

443

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ULTRASOUND EVALUATION OF URINARY INCONTINENCE

Hypothesis / aims of study

To evaluate the correlation between severity of genuine stress incontinence and transperineal sonographic findings

Study design, materials and methods

The subjects were 50 female cases with urinary problems, including 39 of stress incontinence and 11 of dysuria or OAB, and 3 of control. Transperineal ultrasonography using 3.5MHz convex-typed scanner was performed on cases at upright position. The severity of incontinence was evaluated by Pad Test or stress test under full bladder, more than 300ml.

The correlation between sonographic findings of funnelling formation and descent of bladder neck and severity of incontinence was evaluated. Previous study with magnetic resonance imaging (MRI) of 67 elderly women showed that the angle formed between pubic bone and horizontal line was 120.8 (SD5.8) degrees. The descent of bladder neck was evaluated on the basis of this data.

Results

- 1) Nevertheless none of 11 cases of dysuria or OAB and 3 controls showed funnelling formation of the bladder neck, whole cases of 39 with stress incontinence showed it.
- 2) In 29 cases of 39 with stress incontinence the funnelling formation was observed at rest and 10 was at coughing or strain. 13 cases of 29 with funnelling formation at rest were not accompanied by descent of bladder neck even though coughing, indicating type three in the Blavias's classification. And 16 cases showed descent at coughing, indicating coexistence of type two and three.
- 3) It was shown that there was a high correlation between severity of incontinence and not the degree of descent but that of funnelling formation of bladder neck, especially at rest.

Interpretation of results

The transperineal sonographic findings well-correlate with clinical symptoms. The severity of stress incontinence depends on the degree of funnelling formation of bladder neck.

Concluding message

The transperineal ultrasound examination with cases at upright positions shows a high efficiency for diagnosis and severity of stress incontinence.