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IS THE LATERAL CYSTOURETHROGRAPHY NECESSARY IN STRESS URINARY INCONTINENCE PATIENTS?

Aims of Study

The lateral cystourethrography is a radiological method to diagnose or evaluate stress urinary incontinence. But it is a kind of invasive test and can be a cause of urinary tract infection as a complication. Recently video-urodynamic study was used widely and can replace the lateral cystourethrography. To evaluate the efficiency of this radiological study, we studied whether lateral cystourethrography predicts the stress urinary incontinence and whether radiological parameters - the degree of bladder base descent, PUV (Posterior urethro-vesical) angle, urethral diameter - relate urodynamic parameters - VLPP (Valsalva leak point pressure), MUCP (Maximal urethral closing pressure), functional urethral length - in women with stress urinary incontinence.

Methods

This retrospective study included 76 women who underwent lateral cystourethrography and urodynamic study. Proximal urethral support was assessed by lateral cystourethrography at rest and voiding. These 2 images were anatomically superimposed and we measured the degree of bladder descent with PUV angle. Also the urethral diameter was measured below 1cm at bladder. All women were checked VLPP, MUCP and functional urethral length by urodynamic study. We compared all parameters between lateral cystourethrography and urodynamic study.

Results

Mean age of the patients was 46.9 years old (range 26 to 68) and the means of VLPP, MUCP and functional urethral length were 117.3 CmH₂O (range 10 to 200 CmH₂O), 49.2 CmH₂O (range 5 to 110 CmH₂O) and 2.9 Cm (range 1.5 to 4 Cm). The means of PUV angle, degree of bladder descent and urethral diameter were 169.2 ° (range 108 ° to 180 °), 3.0 Cm (range 0.8 to 4.0 Cm) and 0.34 Cm (range 0.11 to 0.74 Cm). As a result, only urethral diameter in radiological parameter was significantly correlated with the VLPP (Pearson correlation $p < 0.05$, SPSS 9.0). Any other parameters in lateral cystourethrography were not correlated to those of urodynamic study.

Conclusions

In our study, only radiological urethral diameter was correlated to VLPP significantly. But the measurement of urethral diameter is not a simple method and it may be incorrect due to the possibility of technical error. So we suggest that the lateral cystourethrography is not necessary to diagnose or predict stress urinary incontinence in women.