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VIDEOURODYNAMICS – DO WE REALLY NEED SIMULTANEOUSLY X-RAY-IMAGING?

Hypothesis / aims of study

Urodynamics is one of the most important investigations in order to evaluate functional disorders of the lower urinary tract. Especially in case of neurogenic dysfunction combined functional and morphological diagnostics has been shown to be effective.
We initiated a study in order to investigate the value of simultaneously X-ray imaging in comparison to standard cystometry in patients referred for functional diagnostics.

Study design, materials and methods

Analysis of clinical, urodynamic and X-ray findings of patients referred for functional diagnostics of the lower urinary tract.

Results

The findings of 1480 consecutive patients (756 women, 724 men; mean age 42,4 (3 – 81) years), who underwent a videourodynamic evaluation were analyzed. In 1130 cases (76,3%) pathological findings were recorded: detrusorhyperactivity/ -hyperreflexia- 49,1%; detrusorhypoactivity/ -hyporeflexia/ -areflexia – 20,7%; low-compliance bladder 9,4% and detrusor-sphincter-dyssynergia - 27%. Simultaneously performed X-ray-imaging revealed in 340 patients (30,1%) the following additional findings: reflux 63,8%; diverticula/ trabeculation 67,9%; descensus vesivae (in women) 39,7%, pathological bladder configuration (i.e. christmas tree shape) 44,7%; open bladder neck 37,4%, signs of detrusor-sphincter-dyssynergia 23,5%. Mean screening time was 28 s.

Interpretation of results

76% of all patients complaining symptoms of lower urinary tract dysfunction revealed pathological findings. In 30% X-ray-imaging showed additional changes of lower urinary tract morphology. These changes are secondary to long-term dysfunction and therefore important for further therapeutic decisions.

Concluding message

Videourodynamic investigations allow a combined evaluation of lower urinary tract function and morphology and are therefore recommended in primary diagnostics. Depending on the individual findings, however, follow-up investigations can de done with or without X-ray imaging.