

MICTURITION EMG IN THE DIAGNOSIS OF RECURRENT UTI'S OF YOUNG WOMEN

Aims of Study

Recurrent UTI's in young women is a common diagnosis in urologic praxis. Besides micturition habits, co-incidence with sexual intercourse and sexual habits themselves, meatal stenosis as well as vesico-urethral reflux is commonly seen as cause. Accordingly the diagnostic steps are ultrasonography of kidney and bladder, i.v. urogram, refluxcystogram, urethral calibration and cystoscopy.

Assuming, that recurrent UTI's can also be caused by a high pressure micturition secondary to functional obstruction at the level of the bladder neck, we examined the value of micturition-EMGs for the diagnosis and therapy of recurrent UTI's.

Methods

From July 1999 to March 2002 103 female patients aged 4 to 60 years (average 31,1) with the diagnosis recurrent UTI were diagnosed in our outpatient care centre. Recurrent UTI was defined as three or more infections/year. In all patients cystoscopy, urethral calibration, refluxcystogram, i.v. urogram and micturition-EMG was carried out after therapy of the acute infection, in addition, a questionnaire was used to clarify the micturitional habits of our patients. The results of all investigations were compared as to their efficacy for diagnosis and treatment of recurrent UTI's.

Results

Only one i.v. urogram revealed a pathologic finding which was not relevant for the recurrent UTI's. In 2 cases vesico-urethral reflux was found. Meatal stenosis was diagnosed in 17 cases. A pathologic pelvic floor EMG during micturition was found in 14 cases (38,8 %). In most of these cases the uroflow alone would have drawn the urologist's attention towards pathological micturition. In most of these patients the questionnaire revealed typical micturition habits such as avoiding unfamiliar toilets or not sitting down on the toilet.

Conclusions

In 103 patients with recurrent UTI's the micturition-EMG gave the most information concerning the disease. The results of the IVP's did not lead to therapeutic consequences, however cystoscopy and urethral calibration showed 17 meatal stenosis leading to therapy, 14 patients showed pathological micturition EMGs, 29 of which received biofeedback therapy in the sense of relaxation-exercises, in 11 cases the therapeutic conversation alone and the explanation of the pathological curve led to termination of the disease. Secondary to these results the algorithm in the diagnosis of recurrent UTI's of young women was changed in our department in a way, that micturition-EMGs are carried out in all cases with recurrent UTI's as a first diagnostic step. In addition ultrasonography of kidney and bladder is carried out. Only in cases in which these investigations show no pathologic findings more invasive procedures such as cystoscopy, urethral calibration, refluxcystogram and i.v. urogram are carried out.