

## **PARADOXAL MOVEMENT OF THE PELVIC FLOOR IN NON-NEUROPATHIC BLADDER/SPHINCTER DYSFUNCTION AND THE EFFECT OF BIOFEEDBACK TRAINING**

### **Aims of Study**

We routinely use dynamic perineal ultrasound to assess the function of the puborectalis muscle in children with micturition complaints. Many children appear to use their pelvic floor paradoxically: they strain when asked to withhold urine or they are not able to use the puborectalis muscle at will. True incidence of this phenomenon is not known yet, but in a study group of 190 girls with dysfunctional voiding abnormal use of the pelvic floor was found in 35%. We evaluate non-neurogenic pelvic floor dysfunction and the effect of training by physical therapy.

### **Methods**

Sixty-five patients that presented to the outpatient clinic with voiding dysfunction, mostly accompanied by fecal constipation, were diagnosed to have a paradoxal movement of the pelvic floor or the inability to contract or release the puborectalis muscle. The diagnosis was made by dynamic ultrasound investigation. A 7 MHz ultrasound probe is put on the perineum and the child is asked to do a hold-up manoeuvre. All the patients were seen by the physical therapists for further examination and therapy. Therapy consisted in a single one hour biofeedback session with rectal examination and anal balloon expulsion in 32 patients and a 2 week episode of biofeedback training by anal balloon expulsion at home in 20 patients. In 13 patients the diagnosis could not be confirmed by the physical therapists.

### **Results**

Three months after training all patients except 2 had complete control over their pelvic floor muscles. In several patients this also cured the voiding dysfunction, most patients needed further biofeedback training to obtain a normal micturition pattern. Patient compliance to the training was high and most parents reported a favourable effect of the training on the voiding dysfunction and the constipation of their children.

### **Conclusions**

Non-neurogenic pelvic floor dysfunction occurs frequently in children with voiding dysfunction and fecal constipation. It can be cured effectively by dedicated physical therapy. The clinical importance of this phenomenon is not clear yet. A future prospective study will be done to learn more about true incidence and therapeutic effect of pelvic floor dysfunction on dysfunctional voiding.