

A Device for Treatment of Detrusor Hyperreflexia by Bio-Feedback

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Summary. Treatment of detrusor hyperreflexia is still a difficult field. Recently bio-feedback has been described as a successful treatment of voiding dysfunction. In this paper we describe a device, which makes it possible for the patients to register any pressure changes in the bladder.

Key words: Bladder hyperreflexia, Bio-feedback.

Introduction

Bladder detrusor hyperreflexia is predominantly treated by drugs. Results of such treatment may often be disappointing. With the introduction of bio-feedback in the treatment of functional voiding disorders promising results have been reported in establishing control of micturition [1–3]. The present report describes a simple bio-feedback device enabling the patient to register intrinsic bladder pressure changes.

Methods

During bladder filling a continuous simultaneous measurement of bladder pressure, rectal pressure and the subtracted intrinsic bladder pressure was performed. The signal from the subtracted intrinsic bladder pressure was fed into an especially designed bio-feedback unit (Fig. 1). Simultaneously pelvic floor activity was monitored by means of a loud-speaker connected to surface perianal electrodes. In this way changes in intrinsic bladder pressure and the effect of pelvic floor squeezing were registered by the patient (Fig. 2). Bladder filling was performed at least 2 or 3 times during the session. Any increase in bladder capacity was noted during the study and the patient was readmitted two weeks later for repeat investigations. Further treatment was based on the findings of the two bio-feedback studies.

Fig. 1. The pressure dependent bio-feedback device

Results

Bladder detrusor hyperreflexia is usually treated by drugs. Results of this treatment are disappointing. With the introduction of bio-feedback in the treatment of functional voiding disorders promising results have been reported in establishing control of micturition [1–3]. The present report describes a simple bio-feedback device enabling the patient to register intrinsic bladder pressure changes.

Till now 5 patients had undergone bio-feedback treatment of hyperreflexia, 2 were adult female patients, 3 were children. We found the 2 adult persons resistant to bio-

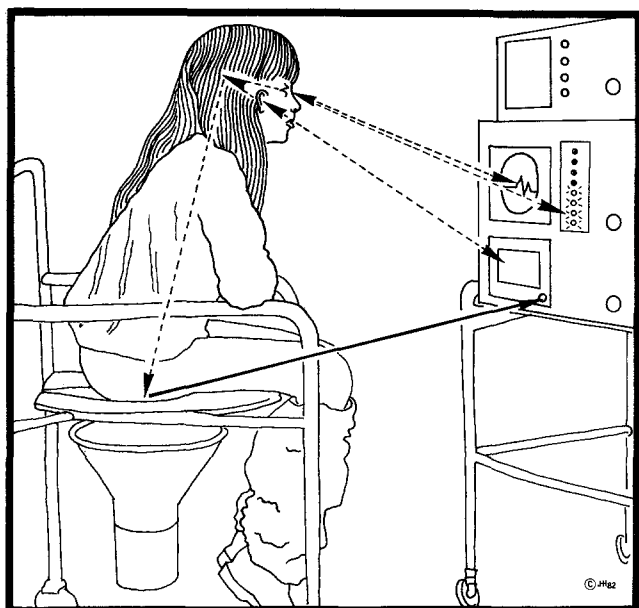


Fig. 2. Diagram of the patient in front of the bio-feedback device enabling the patient to register simultaneously the pelvic floor activity, the intrinsic detrusor pressure and the uro-flow

feedback therapy, whereas the children all reported relief of symptoms after one session of treatment. We conclude that bio-feedback offers a good alternative to drug treatment especially in children. A simple illustration of the bladder pressure can be obtained by means of this bio-feedback unit described here.

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