International Continence Society August 22-26, 1999 29th Annual Meeting Denver, Colorado USA

Category No. | Video Demonstration | Ref. No. 536

Abstract Reproduction Form B-1

Author(s): MH Khadra, V Tse, G. Szonyi, E Wills

Double Spacing

Institution City Country: University of Newcastle, Newcastle Upon Tyne, UK
Concord Repatriation Hospital, Sydney, Australia

Double Spacing

Title (type in CAPITAL LETTERS): CLINICAL APPLICATION OF ULTRASTRUCTURAL STUDIES IN THE DIAGNOSIS OF BLADDER DYSFUNCTION

Aim

The aims of this study were to examine the ultrastructural changes reported to be present in dysfunctional bladders, and to investigate whether these changes could be used as a predictor of urodynamic (UD) diagnosis in a clinical setting.

Methods

Subjects who needed both UD and cystoscopy as part of their clinical management were recruited for this study. After UD, they were classified into one of five dysfunction groups (normal, BOO, idiopathic sensory urgency (ISU), BOO with DI, DI). A detrusor muscle biopsy was taken from the lateral wall of the bladder at the time of cystoscopy for subsequent electron microscopy (EM).

Abstract Reproduction Form B-2

Author(s): MH Khadra, V Tse, G. Szonyi, E Wills

Results

Twenty seven patients were included: 6 normals, 9 BOO, 8 DI and 4 with idiopathic sensory urgency (ISU)). The obstructed group showed the myohypertrophy pattern previously reported. In contrast to previous reports, abnormal junctions were found in all patients. For each patient, the ratios of abnormal to normal junctions was calculated. The values (mean ± standard error) were 1.1 ± 0.1, 2.7 ± 0.2, 6.1 ± 1.2, 13.3 ± 4.4 in normals, idiopathic sensory urgency (ISU), BOO with DI and pure DI respectively ($p = 0.0003$, 0.0042 and 0.04).

Conclusions

These findings confirm that there are distinct morphological changes in the detrusor associated with bladder dysfunction. The ratio of abnormal to normal junctions is a novel measurement and can be used to predict UD dysfunction. An understanding of these complexities indicates that ultrastructural studies may indeed be useful as an adjunct in the diagnosis of bladder dysfunction.