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CLINICAL SIGNIFICANCE OF DETRUSOR SPHINCTER DYSSYNERGIA TYPE IN POST TRAUMATIC SPINAL CORD INJURY PATIENTS

<u>Aims of Study</u>: This study investigated the clinical significance of detrusor sphincter dyssynergia (DSD) type. Specifically, the associations of DSD type with level of injury, completeness of injury, age of injury, upper tract complications, and renal function were evaluated

Methods A retrospective review of the charts, video-urodynamic studies and upper tract radiographic studies of 269 patients with post-traumatic suprasacral spinal cord injuries (SCI) was performed. The patients were categorized according to DSD type, level of injury, completeness of injury, age of injury, and upper tract complications.

Results Of the 269 patients 20 (7.4%), 112 (41.6%), 104 (38.7%) and 33 (12.3%) had no DSD, type 1, type 2 and type 3 DSD, respectively No significant association between specific level of injury (cervical, thoracic, and lumbar) and DSD type was found (p=0.64). The association of completeness of injury to DSD type was significant (p<0.01). Within the complete injury group, no patients had type 1 DSD, 5 (13.9%) had type 2 DSD, and 31 (86.1%) patients had type 3 DSD. The incomplete injury group consisted of 112 (48.1%), 99 (42.5%) and 2 (0.9%) patients with type 1, type 2 and type 3 DSD, respectively. In comparisons to patients with no DSD, the percentage of patients with type 1 DSD was decreased in older age of injury cohorts (p=0.1), the percentage of patients with type 2 DSD increased (p=0.04), and the percentage of type 3 DSD remained unchanged (p=.17). Type 3 DSD was strongly associated with each upper tract complication studied. Patients with type 2 DSD had a significantly greater incidence of upper tract abnormalities, upper tract stones and elevated serum creatinine relative to patients with no DSD or type 1 DSD

<u>Conclusions</u> The clinical significance of DSD type was proven by the association of complete SCI and upper tract complication with type 3 DSD. Patients with incomplete SCI may convert from type 1 to type 2 DSD over a long term and risk increased susceptibility to urologic complications.