

BLADDER NECK BEHAVIOR IN SUPRASACRAL SPINAL CORD LESIONS

Aims of Study

To investigate the influence of bladder neck behaviour in relation to the type of injury (complete or incomplete), bladder morphology, the presence of detrusor sphincter dyssynergia and post void residual urine

Methods

A retrospective review of the video-urodynamic studies of 155 patients with suprasacral spinal cord injuries. Patients were classified in two groups according to the behavior of the neck during the voiding phase: a) patients with bladder neck open, who were subdivided into: 1) with synergy and 2) with dyssynergia, and b) patients with bladder neck closed.

Results

Of the 155 patients, 22 (15%) had a complete injury and 133 (85%) incomplete. All the patients with complete suprasacral injury had detrusor sphincter dyssynergia and alteration of the bladder morphology ($p>0.001$), 114 (73.5%) had the bladder neck open, while 41 (26.5%) had the bladder neck closed. Of these 114, 65 (57%) had detrusor sphincter synergy. The post void residual urine was higher in patients with the bladder neck closed and in those who had sphincter detrusor dyssynergia with the bladder neck open (38) (78%) ($p>0.001$). These two groups of patients being those that showed a higher probability of presenting alterations in bladder morphology (57%) ($p>0.001$).

Conclusions

A bladder neck closed during the flow phase can act in an obstructive way, possibly worsening the consequences of a detrusor sphincter dyssynergia and meaning a higher probability of post void residual urine. Bladder morphology can also be influenced by the behavior of the bladder neck and be the consequence not only of the bladder innervation but also the workings of the sphincter system. A complete suprasacral injury makes us suspect the presence of a detrusor sphincter dyssynergia together with a significant post void residual urine and a alteration of the bladder morphology.