

URODYNAMIC COMPARISON BETWEEN COMPLETE AND INCOMPLETE INJURY IN PATIENTS WITH SPINAL CORD INJURY: CAN URODYNAMIC STUDY BE SKIPPED IN A PATIENT WITH INCOMPLETE INJURY?

Hypothesis / aims of study

In case a patient with spinal cord injury (SCI) has an incomplete injury, urodynamic study (UDS) is sometimes skipped on the assumption that intra-vesical pressure is more stable and detrusor compliance is higher than patients with a complete injury. Thus, we compared the results of UDS between complete and incomplete injury.

Study design, materials and methods

Sixty-two patients, who had been diagnosed with SCI at our hospital and for whom imaging study on spinal cord and UDS had been conducted, were enrolled. UDS was performed in the stabilization status after spinal shock. According to the classification of American Spinal Injury Association (ASIA), ASIA A was defined as complete injury and ASIA B- E as incomplete injury, and comparative analysis was made on neurogenic detrusor overactivity (NDO), detrusor leak point pressure (DLPP), detrusor external sphincter dyssynergia (DESD), maximal cystometric capacity (MCC), and compliance..

Results

The average age at the occurrence of the SCI was 36.4 years, and the average period from the occurrence of SCI to UDS was 18.5 months. Of the patients, 21 (33.9%) had a complete injury and 41 (66.1%) had an incomplete injury. Both groups did not show a significant difference in the presence of NDO and detrusor pressure on NDO (complete group: 59.0cmH₂O vs. incomplete group: 49.5cmH₂O, p>0.05). Also, no significant difference was observed between both groups in the percentage of poor compliance, presence of DESD, DLPP (70.7cmH₂O vs. 60.7cmH₂O), and MCC (404.1cc vs. 424.5cc).

Interpretation of results

The UDS parameters such as DLPP, DESD and detrusor compliance, those can affect the function of the upper urinary tract in a patient with SCI, were not different between complete and incomplete SCI.

Concluding message

In the comparative analysis between complete and incomplete SCI, no significant difference was observed in UDS parameters causing complications on the upper urinary tract. Therefore, it is considered necessary to assess bladder status actively using UDS in a patient with incomplete SCI as well as complete SCI.

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<i>Is this a clinical trial?</i>	Yes
<i>Is this study registered in a public clinical trials registry?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	The IRB of Seoul National University Bundang Hospital
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	No