

## VIDEOURODYNAMIC STUDY IN NEUROGENIC BLADDER AFTER OPERATION FOR LUMBAR INTERVERTEBRAL DISK HERNIA

### Hypothesis / aims of study

To explore the videourodynamic manifestation of neurogenic bladder after operation for lumbar intervertebral disk hernia.

### Study design, materials and methods

A consecutive series of 25 patients with neurogenic bladder dysfunction after operation for lumbar intervertebral disk hernia were analysed retrospectively. They were respectively divided into L4-5 and L5-S1 groups according to the focus, or normal, injured and no drawn groups according to saddle sensation. Their videourodynamic manifestation were analyzed statistically.

### Results

1093 patients were studied with videourodynamic study in my hospital ,during this time there were 25 patents after operation for lumbar intervertebral disk hernia followed up 2-40 months(median, 6months).Bladder neck opening were found 9 patients, partial opening 8,no open 8;bladder sensation normal 11 ,decreased 7,disappeared 3,hypersensitivity 4; bladder stable 23,overactivity 2;during urination having reflex 2,areflexion 23; urinary external sphincterismus 23, detrusor-sphincter dyssynergia 2. vesicoureteral reflux 1 and normal 24. saddle sensation normal 11,decreased 8,disappeared 5,data lost1. all patients showed normal by ultrasound , bladder wall smooth 11, lack of smooth 14. Videourodynamic manifestation including bladder sensation, bladder compliance, stability, bladder neck's opening extent, bladder capacity and urethral pressures were not significantly different between the group L4-5 and L5-S1 ( $p > 0.05$ ), nor was the saddle sensation ( $p = 0.51$ ). But the bladder sensation and urethral pressures were related with the saddle sensation ( $p < 0.05$ ).

### Interpretation of results

clinical urodynamic testing should be considered indicative of voiding difficulty in patients with lumbar intervertebral disk protrusion before and after operation. clinical neurological alterations , decreased bladder sensation, voiding by straining, increased bladder volume , saddle sensation and external sphincter status should be checked. There is no consensus in the literature on the relationship between voiding dysfunction and urodynamic findings in patients with lumbar intervertebral disk protrusion. During this study , uroflow rate could not be done due to without voiding synchronization. We mainly conduct urodynamic testing of storage phase. Areflexion rate in this study is 92%, far beyond 26%in the literature. It may be limit of research subjects. All the subjects is of apparently voiding difficulty because of areflexion existing in pre-operation and post-operation due to nerve injury in operation . Normal bladder sensation is necessary for normal detrusor contractile , but in my research normal sensation rate is 45.8% , voiding reflex is only 8.0%, far inferior to the literature 74%.It is considered afferent pathway is normal ,but efferent pathway may be encompresed or injury or fibrous adhesion . Saddle sensation is related to bladder sensation , at the same time , saddle sensation is related to urethral pressure .It may be with common nerve pathway.

### Concluding message

The videourodynamic changes may not be related with the focus, but the saddle sensation in patients after operation for lumbar intervertebral disk hernia, which need further elucidation, Clinical urodynamic testing is important for neurogenic bladder after operation for lumbar intervertebral disk hernia .It provide the way of understanding of classification, diagnosis, treatment and prognosis of this disease, thereby aim to safeguard upper urinary tract and to improve patient's life quality.

### Disclosures

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