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Miao D[1], Liao L[2]
***1.*** *Dept of Rehabilitation, Bejing Longfu Hospital,* ***2.*** *Dept of Urology, China Rehabilitation Research Centre*

# EXPLORING THE EFFECT OF HERPES SIMPLEX VIRUS MEDIATED GENE TRANSFER OF KYNURENINE AMINOTRANSFERASE IN OVERACTIVE BLADDER RATS

Hypothesis / aims of study
To explore whether or not the replication-defective herpes simplex virus(HSV) mediated gene transfer of KATII could treat detrusor overactive in rats with overactive bladder(OAB) .

Study design, materials and methods
The thirty S-D rats were randomly divided into three group, 1) sham group: injected normal saline(n=10), 2)OAB HSV group: injected HSV(n=10), 3)OAB HSV KATII group: injected HSV KATII(n=10). Bladder instillation was underwent two weeks after bladder wall injection, control group infusion of saline, OAB HSV and HSV KATII group infusion of 5% acetic acid. After urinary observation, cystometry, KATII protein and mRNA in L6-S1 dorsal root ganglia were examined.

Results
OAB rats with experimental group and control group cystometry in intercontraction intervals (ICIs), maximum voiding pressure, the maximum filling pressure, the time to first non-voiding bladder contraction (NVC) and NVC number have significant difference. Western blot method KATII / GADPH and quantitative PCR KATII / β-action mRNA were significantly different ($P < 0.05$).

Interpretation of results
In OAB rats, HSV KATII injection in bladder wall can be transfected into L6-S1 dorsal root ganglion. It can increase kynurenine aminotransferase (KYNA), inhibit the activation of N-methyl-D-aspartic acid (NMDA) receptor, regulate the expression of KAT, therefor, inhibit the detrusor overactive.

Concluding message
Herpes simplex virus mediated HSV KATII injection in bladder can partly inhibit the detrusor overactive of OAB rats.

Disclosures
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