URODYNAMIC EVALUATION OF BLADDER FUNCTION IN OLD MAN WITH ABNORMAL VOIDING AFTER STROKE

Hypothesis / aims of study
To evaluate the urodynamic changes of the old man over 60 years old with abnormal voiding after stroke.

Study design, materials and methods
Urodynamic evaluation was performed in 50 elderly men with abnormal voiding after stroke including 28 cases (71.49±7.65y) with BPH and 22 (69.25±5.78y) with no BPH. Sixteen old men (70.63±6.52y) with normal voiding as control. The urodynamic parameters were compared between different groups. P value less than 0.05 is significant.

Results
There are significant differences between the stroke group with BPH and those without BPH of maximal voiding detrusor pressure (Pdet.max.void ) (54.5±9.9cmH2O vs.46.4±8.2 cmH2O), maximal urethral closure pressure(Pmax.close.urethra) (71.4±10.7cmH2Ovs 55.6±5.6 cmH2O) and the residual (12.9±5.3mlvs.9.0±3.4 ml)(P<0.05).
The patients with no BPH and those with BPH showed a significant increase in detrusor hyperreflexia frequency compared with normal controls (72.7%(16/22) vs.75%(21/28) vs. 10.0%(2/20)) and their maximum bladder capacity decreased significantly (298.8±112.6 mlvs.276.5±132.2 vs.478.6±92.6 ml) , p < 0.05.

Interpretation of results
Previous research have affirmed that stroke can induce inhibitory action from centrum of bladder control located in the brain to the centrum of micturition reflex located in the lumbosacral portion weaken, which can bring about detrusor hyperreflexia.
Weaken or disappearance of detrusor reflex occured in the convalescence or complications issue in a few of examples of the stroke group, indicating there may be severe damage or irreversible change in the related central nervous system after stroke.
The research find the notable increase of the incidence of detrusor hyperreflexia indicated that it may have some connection with the notable decrease of bladder volume in the stroke group compared to normal control.
Compared with the stroke without BPH, the stroke with BPH showed significant increase in the maximal voiding detrusor pressure(Pdet.max.void ), maximal urethral closure pressure(Pmax.close.urethra) and the residual which indicates BPH exert a certain action. The bladder function of the stroke impatient with BPH may have entered into the compensatory stage before stroke. There is not significant difference between the stroke with BPH and without BPH in the incidence of detrusor hyperreflexia, but the stroke with BPH have showed a increasing tendency. It is still need to be further evaluation in the future due to the limitation number of the patients.

Concluding message
The significant changes in urodynamic evaluation in cases with BPH after stroke indicating the importance of treatment BPH synchronously during the stroke recovery treatment.

References

Specify source of funding or grant
The First Teaching Hospital of Zhengzhou University, China

Is this a clinical trial? Yes

Is this study registered in a public clinical trials registry? No

Is this a Randomised Controlled Trial (RCT)? Yes

What were the subjects in the study? HUMAN

Was this study approved by an ethics committee? Yes

Specify Name of Ethics Committee The First Teaching Hospital of Zhengzhou University REC

Was the Declaration of Helsinki followed? Yes

Was informed consent obtained from the patients? Yes