

## THE AGE OF RECOVERY FROM ENURESIS CORRELATES WITH THE NATURAL COURSE OF OAB IN ADULTS

### Hypothesis / aims of study

During the last few years a lot of studies were performed to evaluate correlation between the development of OAB symptoms in adult patients and the previous history of enuresis in childhood. As it was proved before children suffered from enuresis have a higher risk of OAB occurrence in adolescence than those without enuresis. 20% to 38% of OAB patients experienced enuresis in childhood. At the same time correlation between OAB symptoms in adult patients and the course of enuresis in childhood is still remains to be unclear. The aim of current research was to evaluate this correlation.

### Study design, materials and methods

186 non-neurogenic OAB patients - 168 females and 18 males were involved in the study. All patients were underwent urodynamic investigations. 114 (61,3%) OAB patients experienced urge urinary incontinence. Severity of OAB symptoms was defined analyzing data of 3 days voiding diaries. History of enuresis in childhood and the age of recovery from it were taken.

### Results

Data analysis revealed that 39 (21,0%) of OAB patients experienced enuresis in childhood and 3 (1,6%) have had it in adolescence. Enuresis was significantly prevalent in males than in females. About 9 (50,0%) of 18 males and 30 (17,9%) of 168 females suffering from OAB had a history of enuresis in childhood ( $\chi^2 = 8,01$ ;  $p < 0,01$ ). At the same time the recovery from it did not differ and was about  $9,3 \pm 0,5$  years for both sexes. Severity of OAB symptoms did not vary according to the presence of enuresis in childhood. But the age when a child stopped urinate at night was of paramount importance. Only 12 (52,1%) of OAB patient with urge urinary incontinence have recovered from enuresis before they reached ten years. At the same time kept dry at night by the age of ten majority (12 (92,3%)) of OAB patients without urge urinary incontinence. As it was found the older the child was when he/she had recovered from enuresis the higher risk of the development of urge urinary incontinence he/she would have in adolescence ( $\chi^2 = 5,11$ ;  $p < 0,005$ ), as well as an increased number of urge urinary incontinence episodes he/she would suffer ( $r = 0,38$   $p < 0,005$ ) thus the degree of OAB would be more severe.

Results of urodynamic investigations of OAB patients with and without enuresis in childhood were analyzed. Principal cystometric parameters describing bladder sensitivity did not differ according to the presence of enuresis whereas involuntary detrusor contractions (IDC) were prevalent in patients suffered from involuntary micturitions at night. IDC were observed in 9 (29,0%) of 31 OAB patients with enuresis in childhood and only in 16 (11,8%) of 136 OAB patients without it ( $\chi^2 = 4,64$ ;  $p < 0,05$ ). Furthermore IDC were more intensive and occurred in lower bladder volume in OAB patients experienced enuresis than in those without enuresis.

### Interpretation of results

OAB patients experienced enuresis in childhood have a higher risk to develop urge urinary incontinence. Involuntary detrusor contractions are also a more frequent event in this group of population.

### Concluding message

These finding could be explained by the presence of common pathway for enuresis and OAB development, particularly impaired neural control of detrusor activity in the storage phase of the micturition cycle. It is evident that the more severe alteration is the later normal micturition reflex would be formed and the enuresis would disappear. Consequently as OAB develop in this subpopulation it takes its more severe form and is accompanied by urge urinary incontinence.

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<b>What were the subjects in the study?</b>	<b>HUMAN</b>
<b>Was this study approved by an ethics committee?</b>	<b>Yes</b>
<b>Specify Name of Ethics Committee</b>	<b>Local Ethics Committee of St Petersburg State Pavlov Medical University</b>
<b>Was the Declaration of Helsinki followed?</b>	<b>Yes</b>
<b>Was informed consent obtained from the patients?</b>	<b>Yes</b>