

URGENCY IS LINKED TO URINARY NERVE GROWTH FACTOR

Hypothesis / aims of study

Urgency is the cornerstone symptom of overactive bladder (OAB) and previous studies have shown that urinary nerve growth factor (NGF) levels are significantly increased in patients with OAB compared to normal controls and suggested that NGF as a biomarker for OAB. Further studies have also shown that the NGF level decreases in OAB patients who respond to treatment. However, it is not known whether elevated NGF solely depends on the presence urgency and not other lower urinary tract symptoms. We compared the level of urinary NGF between OAB patients and patients with comparable lower urinary tract symptoms (LUTS) other than the presence of urgency to determine the direct relationship between urgency and urinary NGF.

Study design, materials and methods

Urinary NGF levels were measured in 19 patients with OAB (OAB group) and 12 with comparable LUTS but without urgency (LUTS group). Urinary NGF level was measured using an enzyme-linked immunosorbent assay and corrected with urinary creatinine level. Ethical approval by the local IRB and patient informed consent was acquired.

Results

There was no significant difference in age between the OAB (mean 64.6 years) and LUTS group (mean 61.4 years). However, the urinary NGF levels between the OAB and LUTS groups were significantly different with values of 3.24 ± 2.80 and 0.28 ± 0.26 NGF/Cr, respectively.

Interpretation of results

Although the number of patients was small, a clear difference between the two study groups was observed. Our results suggest that among LUTS, there seems to be a direct link between urgency and urinary NGF. However, how they are related needs further elucidation.

Concluding message

A more accurate understanding of urgency is needed to better define OAB. These results may help in the further understanding of urgency.

<i>Specify source of funding or grant</i>	None
<i>Is this a clinical trial?</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>	Yonsei University Severance Hospital IRB
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes