

## THE CLINICAL EFFECTS OF AMITRIPTYLINE ON NOCTURIA IN PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA

### Hypothesis / aims of study

Anticholinergics suppress muscarinic receptors in bladder smooth muscle, increase urine storage. They are globally using treating benign prostatic hyperplasia patients with nocturia which is attributed to diminished nocturnal bladder capacity. But, the side effects of them include dry mouth, dry eyes, constipation, drowsiness, and tachycardia. These adverse effects limit dosing and often decrease patient compliance. The aim of this study is made to know the effect of amitriptyline, as the one of the first-line treatments on nocturia in patients with benign prostatic hyperplasia

### Study design, materials and methods

Between June 2005 and June 2006, a prospective randomized study was conducted on 50 male patients with benign prostatic hyperplasia. Mean age was 64.2 years and the patients were treated with doxazocin 4mg (Group I), doxazocin4mg with tolterodine SR 4mg (Group II), doxazocin 4mg with amitriptyline 10mg (Group III). All 50 (Group I=20, Group II=14, Group III=16) were followed up for 4 weeks. We measured treatment efficacy with clinical parameters and three days of frequency volume chart at baseline and 4 weeks.

### Results

After 4weeks of treatment, all the patients had significant improvement in IPSS, QoL score among the clinical parameters and 24-hour frequency, nocturia among the parameters from frequency volume chart ( $p<0.05$ ). In post-treatment comparison of the nocturia, there was significant difference between group I and group II as well as group I and group III ( $p<0.05$ ), and no difference between group II with III ( $p>0.05$ ). Although 1 case of mild dry-mouth was seen in group II, 1 case of mild dry-mouth and drowsiness in group III, any patient wasn't dropped out due to side effect.

### Interpretation of results

We could find significant improvements in IPSS, QoL score and nocturia after treatment with amitriptyline 10mg.

### Concluding message

Amitriptyline 10mg would be helpful as a first-line therapy on nocturia in patients with benign prostatic hyperplasia.

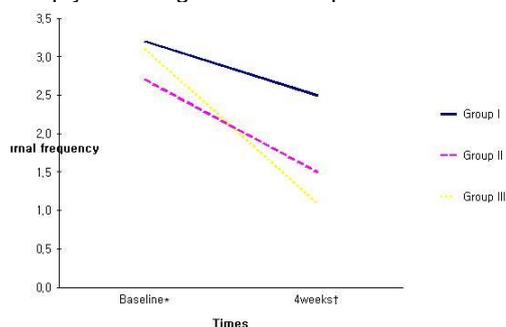


Fig. 1. Comparison of nocturia between each groups. Note the significant improvement after treatment in group II, III ( $p=0.043$ ,  $p=0.001$ ) and indifference between group II and III ( $p=0.101$ ) at post-treatment. \*: baseline ( $p=0.669$ ), †: 4weeks ( $p=0.001$ ), by Kruskal-Wallis test

Specify source of funding or grant	none
Is this a clinical trial?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	Approved by local ethics committee
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes