

DETRUSITOL AND MULTICOMPONENT BEHAVIORAL TRAINING FOR OVERACTIVE BLADDER SYNDROME: ARE THEY SYNERGISTIC?

Hypothesis / aims of study

Behavioral and drug therapies are known to be effective for reducing OAB symptoms, few patients are cured with either treatment alone. Since multicomponent behavioral training (MCBT) and antimuscarinics are likely to operate by different mechanisms, they may have synergistic effects resulting in better clinical outcomes.

This study aims to compare the effectiveness of MCBT, detrusitol 2mg twice daily (bd) and a combination of both in the treatment of OAB.

Study design, materials and methods

92 patients with OAB were recruited into this prospective study and they were randomised into 3 treatment arms,

- multicomponent behavioral training (BT)
- Detrusitol (Det) and
- combination of bladder training and Detrusitol (Comb).

We used 2 Quality of Life questionnaires, i.e. Bristol Female Lower Urinary Tract Syndromes (BFLUTS) and King's Health Questionnaire (KHQ) to assess the patients' symptoms. The patients' voiding diaries were also obtained.

The 2 QOL questionnaires and voiding diaries (3-days) were collected at weeks 0, 12 and 18 of the study. The patients in the bladder training (BT) group were taught exercises in the beginning of the study and were assessed at weeks 6, 12 and 18. The patients in the Detrusitol group were started on Detrusitol 2mg twice a day for 12 weeks and then stopped on the medications. The patients in the combination group similarly received Detrusitol 2mg twice a day for 12 weeks and bladder training exercises taught and assessed at the intervals similar to the BT group.

Results

i) Frequency charts

There were significant improvements in the 24-hour micturition frequencies at week 12; 14.8%, 22.3% and 30.3% in the bladder training (BT), Detrusitol (Det) and combined (Comb) arms respectively.

Bladder training had no significant improvements in day frequencies while the improvements in day frequency were 24% and 30.7% for the Detrusitol and combination groups respectively.

There were no significant improvements in the frequency of nocturia in all 3 groups.

The maximum volume voided for the day was not increased in all 3 arms of the study.

The mean voiding volumes improved by 9%, 37% and 17% in the BT, Det, Comb arms respectively.

Mean voiding intervals improved by 62.3%, 26.6% and 41.8% in the BT, Det, Comb arms respectively.

After discontinuation of the medication, the group taking Detrusitol showed no significant improvement in micturition frequency at 18 weeks ($p=0.07$) when compared to the initiation of therapy. In comparison, the groups receiving combination therapy and bladder training still had significant improvements of 33.6% and 20.5%.

ii) BFLUTS

At week 12, there was a significant drop of 37%, 56%, 46% in urgency scores respectively in the BT, Det, Comb groups respectively. The incontinence scores also decreased by 30%, 19%, 21%. Overall improvement in the satisfaction rate were 50%, 69%, 50%. The improvements in the scores were still evident at week 18 of the study.

iii) KHQ

There were improvements in most of the areas of KHQ.

Interpretation of results

Our study has however showed encouraging and statistically significant improvements in both FV parameters and KHQ scores. Our results also showed a statistically significant improvement in the mean incontinent episodes in the combination group only, suggesting that there may indeed be a synergistic effect when MCBT is combined with antimuscarinics in the treatment of OAB.

In terms of the QOL questionnaires, the patients had shown encouraging, statistically significant improvements in almost all areas of KHQ and BFLUTS.

Concluding message

In the treatment of patients with OAB, the use of antimuscarinics, bladder training or combination therapy are effective means of therapies in reducing the micturition frequency, urge incontinence and improving the overall satisfaction of patients.

Medications such as detrusitol provided fast efficacy in terms of improvements of symptoms. However, patients who received combination therapy had long lasting improvement in micturition frequencies.

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| Specify source of funding or grant | NO FUNDING/GRANT |
| Is this a clinical trial? | Yes |
| Is this study registered in a public clinical trials registry? | Yes |
| Specify Name of Public Registry, Registration Number | Health Sciences Authority, Singapore 0622264V |
| What were the subjects in the study? | HUMAN |
| Was this study approved by an ethics committee? | Yes |
| Specify Name of Ethics Committee | Changi General Hospital Ethics Committee |
| Was the Declaration of Helsinki followed? | Yes |
| Was informed consent obtained from the patients? | Yes |