

EFFECTS OF TRANSDERMAL AND ORAL OXYBUTYNYN AND ITS METABOLITES ON CYSTOMETROGRAM PARAMETERS

Aims of Study

Transdermal and oral Oxybutynin (OXY) have been demonstrated to effectively treat symptoms of overactive bladder. This study evaluated changes in cystometrogram (CMG) parameters in patients treated with either transdermal oxybutynin (TDS oxy) or immediate release oral oxybutynin (po oxy).

Methods

Patients with overactive bladder enrolled in a randomized double-blind study evaluating the efficacy and side effects of po and TDS oxy were titrated to tolerable side effect profiles. Multichannel cystometry was performed at baseline and following six weeks of treatment using medium fill water cystometry. Differences in volume at 1st contraction, amplitude at 1st contraction, volume at 1st desire, and amplitude of highest contraction from baseline to six weeks of treatment were compared between groups using two-sample t-tests. Differences in parameters from baseline to six weeks were compared within groups using paired t-tests. Serum levels of OXY and DEO were obtained at six weeks and correlated with CMG parameters using Pearson correlations.

Results

Thirty-two patients were included in the po oxy group and 36 patients were included in the TDS oxy group. Patients were >90% Caucasian and 64 ± 15 yrs of age. All patients who had detrusor instability at baseline demonstrated detrusor instability during therapy. Paired t-tests revealed a significant increase in volume at 1st contraction from baseline to six weeks in the TDS oxy group (66 ± 126 ml.; $p = 0.0055$), but not in the po oxy group (45 ± 163 ml.; $p = 0.1428$). Two-sample t-tests revealed no significant differences between groups for any of the CMG measures (p 's = 0.11-0.88). There were no significant correlations between serum levels of OXY or DEO and the analyzed CMG parameters.

Conclusions

TDS oxy was found to significantly increase bladder volume at 1st involuntary detrusor contraction while not affecting other CMG parameters.