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PRESCRIBING ANTIMUSCARINICS FOR OVERACTIVE BLADDER; HOW MANY CHANCES DO WE HAVE TO GET IT RIGHT?

Hypothesis/ aims of study

The prescription for medicine is the most common medical intervention in developed countries. Prescriptions for antimuscarinic medication for patients with overactive bladder (OAB) cost the UK an estimated 81 million pounds from March 2008-2009. The National Institute of Clinical Excellence (NICE) produces guidance on best practice for medical practitioners and advises the use of immediate release oxybutynin as first line drug treatment for patients with OAB because of a favourable economic model (1). It is well known that immediate release oxybutynin is not well tolerated by patients. In practice, use of immediate release oxybutynin has been superseded by extended release formulations and medication with greater muscarinic receptor selectivity which are associated with fewer side effects and better persistence with treatment.

It is possible that patients who have not tolerated the first line drug for OAB may not want to try an alternative medicine, or may have a negative bias towards the effectiveness of subsequent treatment and a lower threshold to stop medication in the event of side effects or residual symptoms. So, is the first prescription the best chance to engage patients in treatment?

The aim of this prospective study was to investigate the use and persistence with commonly prescribed antimuscarinic medications in a secondary care population of women with OAB over a 2 year period. Of particular interest was persistence with second and third line antimuscarinics and whether they were associated with better adherence and persistence with treatment than the first prescribed medicine.

Study design, materials and methods

Women with symptoms of idiopathic OAB referred from primary care to 2 tertiary Urogynaecology centres were recruited into a prospective study investigating the management of OAB in clinical practice. Patients were recruited into the study between May 2006 and August 2007. After a baseline and 6 week visit, patients were invited for follow-up at 3 monthly intervals for a minimum of 12 months.

All patients were given written and verbal information about the management of OAB and were offered long-acting single daily dose antimuscarinic medication. The first line antimuscarinic agent prescribed in the two units was either solifenacin or extended release tolterodine. The choice of subsequent antimuscarinics was based on both the prescribing doctors' preference and the patients' preferred route of administration. Subsequent antimuscarinics prescribed for OAB were extended or immediate release tolterodine, transdermal, immediate and extended release oxybutynin, solifenacin and darifenacin. The duration of medication use and reasons for stopping treatment were ascertained by direct questioning.

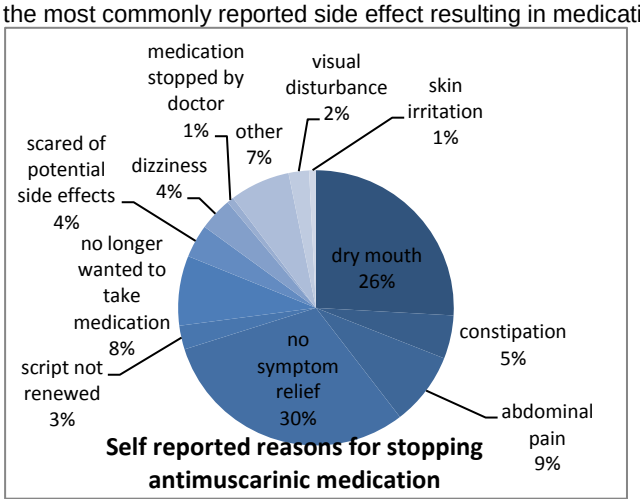
Results

251 women (mean age 55yrs) consented to take part in the study. 133 patients (53%) completed 12 months follow-up of which 68 patients (27%) completed a further 12 month follow-up.11 patients (4%) did not complete a baseline assessment, and 107 patients (43%) dropped out of the study within 6 months. Data from patients who completed follow-up were used in this analysis. 96% of patients were offered pharmacological treatment, of which 4% did not collect their prescriptions.

The first line antimuscarinic agents (solifenacin or extended release tolterodine) accounted for 88% of all prescribed medications.

The majority of patients (64%, n=82) used a single agent. 22% of patients had 2 medication switches, 8% and 2% of patients switched medicines 3 and 4 times respectively. The mean duration of medication use was 17.5 and 27.2 weeks in women completing 12 and 24 month follow up respectively.

42% of patients stopped solifenacin due to non-drug side effect related reasons, for tolterodine this value was 47%. Reasons for stopping treatment unrelated to the side effects from medications included inadequate symptom relief, fear of side effects, failure to renew the prescription (either by conscious intention or due to a lack of instruction by the physician about continuing medication) and simply not wanting to continue medical treatment. The figure below shows the reasons for discontinuation of antimuscarinic medication. Reasons other than adverse drug effects accounted for a greater proportion of drug discontinuations in second/third and fourth line antimuscarinic agents compared with first line agents (Chi Square test P<0.01). Dry mouth was the most commonly reported side effect resulting in medication discontinuation.



The mean duration of the first prescribed medication was 17.2 weeks, and for the second, third and fourth line medications were 13.2, 7.6 and 5.3 weeks respectively. Comparison of use of the first and subsequent medication prescriptions showed that persistence with the first prescribed drug was significantly higher than subsequent preparations (Kruskal-Wallis test $P<0.01$). The percentage of patients without symptoms relief also increased significantly with subsequent prescriptions.

Interpretation of results

In this patient population, almost two thirds of patients used a single antimuscarinic drug. Use of first line antimuscarinic agents in the 2 clinic populations accounted for 88% of all prescriptions. With increasing medication switches; the use of medication was for a shorter period of time, and the reasons stated for ceasing treatment were more likely to be unrelated to side effects of the medication.

Concluding message

The majority of patients prescribed antimuscarinic medication for OAB only ever use a single agent. Subsequent medication switches involve shorter uses of the medication and symptom relief is more limited, but is unrelated to medication side effects. Medication switches may be associated with loss of faith in the clinician and the treatment, less willingness to try an alternative medication and lower satisfaction from treatment. Given the fact that most patients will only ever use one medication for OAB; the first prescription may be an important intervention in patients' engagement with, and outcomes from treatment.

References

1. NICE implementation uptake report: Drugs used in the management of urinary incontinence. www nice org uk 2009

Specify source of funding or grant	**No funding**
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	**Guys & St Thomas' research ethics committee**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**