

LONG-TERM ADHERENCE TO ANTIMUSCARINIC DRUG THERAPY IN EVERYDAY PRACTICE: A SYSTEMATIC REVIEW

Hypothesis / aims of study

Antimuscarinic drug treatment for overactive bladder (OAB) and urinary incontinence (UI) is known for its high incidence of adverse events and henceforth poor adherence and persistence. No systematic review of this has been published to date. This systematic review aims to review long-term (>6 months) adherence of antimuscarinic drugs in daily clinical practice. Moreover, it tries to identify risk factors for discontinuation, which could be of aid for physicians prescribing these drugs.

Study design, materials and methods

This systematic review was done according to PRISMA-guidelines. A systematic search was performed on December 28, 2012 on PubMed (MEDLINE) and Embase, using synonyms for incontinence, overactive bladder and antimuscarinics, combined with synonyms for medication-adherence. The search syntax was based upon a search strategy as used before by the National Institute of Health and Clinical Excellence (NICE). Only English papers from the last 10 years were taken into consideration. Subsequently, title-, abstract and fulltext-screening took place to identify eligible articles for this review. Only studies using established pharmaco-epidemiological parameters (e.g. medication-possession-rate [days for which drugs were distributed divided by the total number of days of a certain period], persistence-rate [number of patients persisting with drugs after certain period of time]) were included. We chose to include only pharmaceutical database studies (using prescription and insurance-claim data) and patient's self-reports-studies to avoid the possible selection-bias which is present in extension studies of randomized controlled trials. Database studies give a better picture of everyday-practice than trials, which are biased by the 'study-element'.

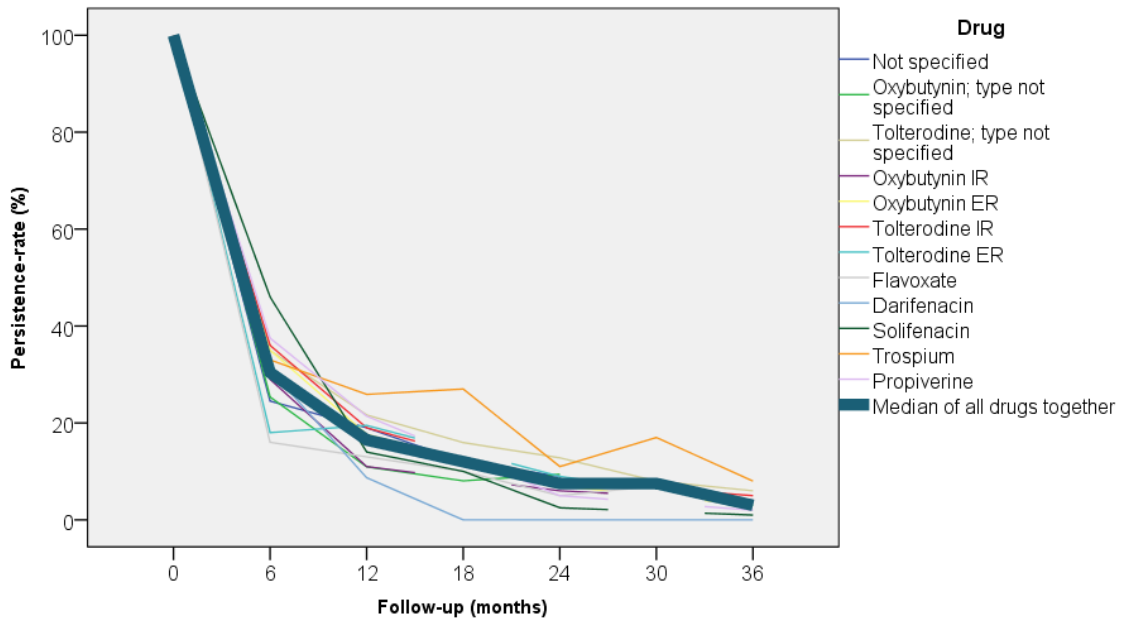
Results

A total of 1245 titles were screened, after which 102 abstracts were read. Fifteen studies were eventually included, containing 191,726 unique patients; mean age was 70.4 years. Eleven studies were 'database-studies' and four studies were 'self-reports' (surveys/patient interviews). Oxybutynin and tolterodine were the most studied drugs. Regardless of which specific antimuscarinic drug is studied, persistence-rates are usually very poor. When taking all drugs together, persistence-rates were (min.-max.): 18%-12% at 6 months, 12.0-75.5% at 12 months, 8-15% at 18 months and 6-12% at 24 months. Some patients do not even refill their first prescription: this was the case in 32.9%-36.9%. For specific formulations, these figures could be much worse, with persistence-rates at one year being maximally 3%, 6% and 9% for solifenacin, oxybutynin IR and flavoxate, respectively. Mean MPRs reported were also very low, with a mean of 0.37 at 12 months. A couple of risk factors for discontinuation could be identified. The three most important of these are: younger age, use of oxybutynin and the use of IR-formulations. It was noticeable that definitions used varied widely between the various studies, rendering a good meta-analysis impossible.

Interpretation of results

Although certain patients seem to be more at risk of discontinuation of their antimuscarinic treatment than other and certain formulations give higher non-persistence than others, in general, physicians should be aware of the very low real-life adherence and persistence, as was observed in the studies included in our systematic review. Although 'old-fashioned' antimuscarinics like oxybutynin IR have higher discontinuation rates than others, newer agents are not unequivocally better with regard to adherence. Upcoming new drugs like β_3 -agonists and vanilloid-receptor antagonists might become good alternatives for classical antimuscarinics in the near future. Improvement of adherence and persistence of medication should be an important point of focus in the development of new drugs for OAB and UI. Besides, non-medical treatments should perhaps be tried first, before focusing on treating medically.

Figure 1. Persistence-rates shown as graphs per drug. Abbreviations: ER = extended release; IR = immediate release; n.s. = not specified (if IR or ER).



Concluding message

Long-term adherence in antimuscarinic drug therapy in everyday practice is extremely poor, regardless of which formulation is studied.

Disclosures

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