Long-term adherence to antimuscarinic drug therapy in everyday practice: a systematic review

Paul W. Veenboer¹, Marcel L. Bouvy², J.L.H. Ruud Bosch¹

¹ Department of Urology, University Medical Center Utrecht, Utrecht, The Netherlands
² Department of Pharmaceutical Sciences, Utrecht University, Utrecht, The Netherlands

INTRODUCTION

Antimuscarinic drug treatment for overactive bladder and urinary incontinence 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.

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.

Regardless of which specific antimuscarinic drug is studied, persistence-rates are usually very poor; see the graphs.

A number 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.

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. Only English papers from the last 10 years were taken into consideration. Subsequently, title-, abstract and full text-screening took place to identify eligible articles for this review.

Only studies using established pharmaco-epidemiological parameters 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’.

CONCLUDING MESSAGES

Long-term adherence in antimuscarinic drug therapy in everyday practice is extremely poor, regardless of which formulation is studied. The search for new pharmaceutical targets for the treatment of overactive bladder and urinary incontinence should definitively continue.