

# #409 A Retrospective Review of our Clinical Experience in the use of Mirabegron for Management of Overactive Bladder Symptoms in the Older Person

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## Abstract

**Aim:** To describe our clinical experience in an outpatient setting on the efficacy and tolerability of mirabegron as a treatment option in management of overactive bladder (OAB) symptoms in the older person.

**Methods:** We retrospectively reviewed electronic medical records of patients who were prescribed a hospital-subsidised script of mirabegron for OAB symptoms between 1st January 2016 and 31st August 2018 at the Aged Care Continence Clinic at St John of God Midland Hospital in Western Australia.

**Results:** There were 26 patients who were prescribed mirabegron with the mean age of 79 years old. 42.3% had a history of cognitive impairment. 76.9% had failed prior antimuscarinic therapy or treatment for benign prostatic hypertrophy due to ineffectiveness or adverse drug effects. Of these, 60% reported improvement of urinary symptoms with mirabegron. In total, 17 out of 26 patients reported improvement of OAB symptoms. Three patients developed adverse effects, which included hypertension, recurrent urinary tract infections, and dry mouth respectively, and the medication was ceased as a result.

**Conclusions:** Mirabegron is effective in older persons with OAB and in those who have failed previous therapy. There is low incidence of adverse effects experienced. Mirabegron is preferred in the management of OAB for older population with multiple comorbidities and cognitive impairment given its tolerability profile.

## Introduction

Overactive bladder (OAB) symptoms in the older population are rarely defined as a singular cause, given age related changes and existing comorbidities such as cognitive and functional impairment (1).

Antimuscarinic agents have been the mainstay of oral therapy for OAB symptoms; however, they are associated with suboptimal efficacy and anticholinergic burden, which is especially concerning in older, frail person, which can affect tolerability (1-3).

In a prospective 12-week randomised placebo-controlled trial that was conducted by Wagg *et al.* on 888 patients aged more than 65 years with OAB symptoms for more than 3 months, mirabegron, a  $\beta$ 3-adrenoreceptor agonist (25 mg and 50 mg daily dosing) was more superior to placebo in improving major OAB symptoms (4). It was well tolerated with no unexpected adverse effects due to its lack of anticholinergic properties.

Mirabegron is not funded by the Pharmaceutical Benefits Scheme in Australia. The prescription of mirabegron is made available in our continence clinic through a hospital subsidy.

The aim of this study is to describe our clinical experience in an outpatient setting on the efficacy and tolerability of mirabegron as a treatment option in management of OAB symptoms in the older person.

## Methods

This was a retrospective review of electronic medical records of patients aged more than 65 years old who were prescribed mirabegron for OAB symptoms between 1st January 2016 and 31st August 2018 at the Aged Care Continence Clinic.

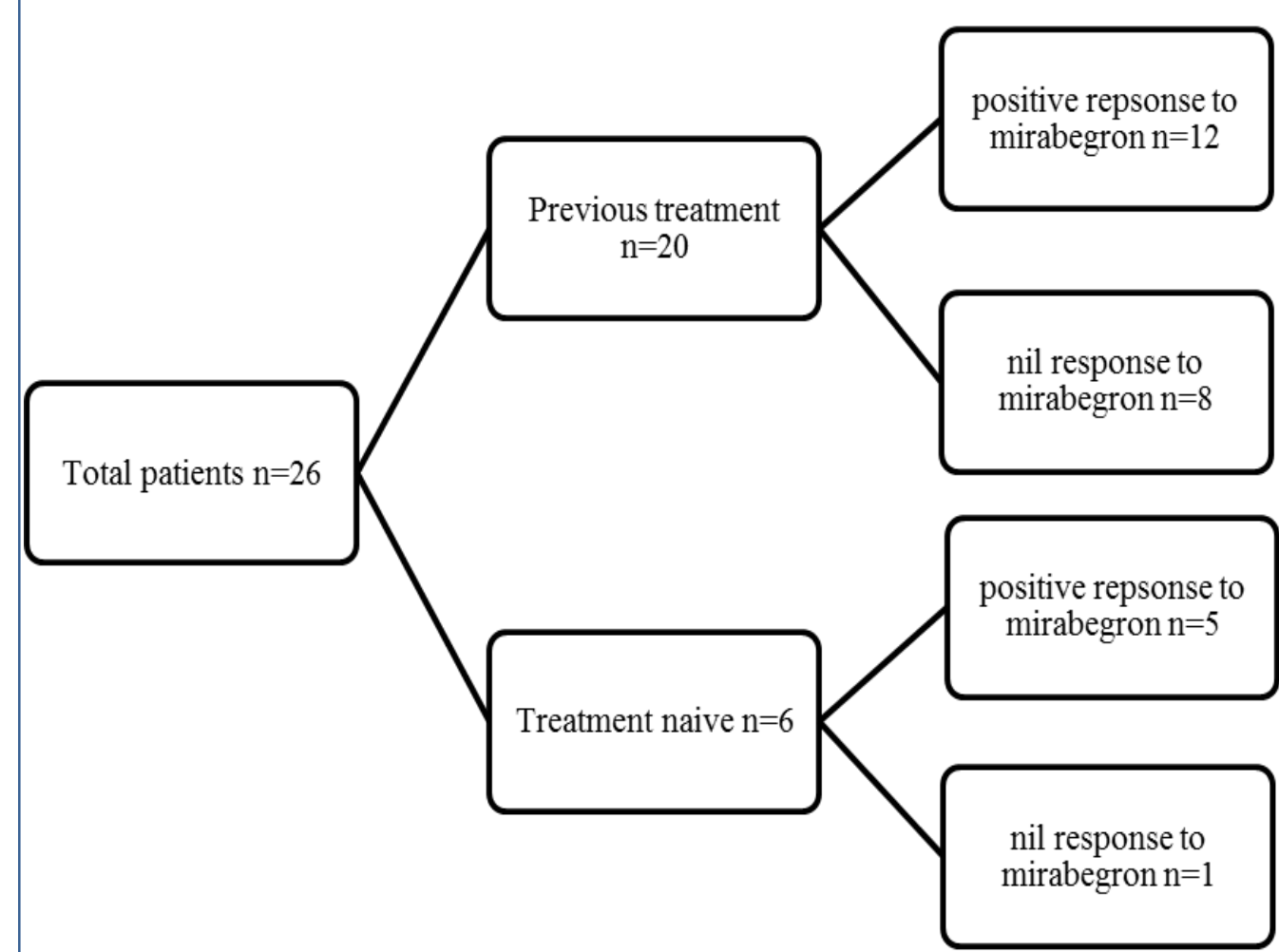
Electronic medical records were individually reviewed for demographic data, relevant medical history (including cognitive impairment), previous pharmacotherapy for OAB symptoms and reasons for discontinuation, urinary symptoms of OAB reported, available 3 day bladder diary to monitor treatment response during follow up at 4 weeks and 3 months, pre and post treatment blood pressure (BP), heart rate (HR) and post void residual volume (PVR) to monitor for adverse effects of mirabegron therapy, and urinalysis to exclude and manage underlying urinary tract infection (UTI).

## Results

There were 26 community dwelling patients who were prescribed mirabegron with the mean age of 79 years old (ranged 65 to 91 years old). 69% were females and 42.3% had a history of cognitive impairment. Twenty patients (76.9%) had failed prior antimuscarinic therapy or treatment for benign prostatic hypertrophy (BPH) due to ineffectiveness or adverse drug effects (Fig 1). The remaining 6 were treatment naïve for OAB symptoms.

Seventeen patients reported improvement of OAB symptoms (sixteen in urgency, thirteen in frequency, and fourteen with nocturia). Of these, twelve had failed previous therapy. Six of the eleven patients with cognitive impairment who failed previous therapy, showed improvement of OAB symptoms with mirabegron. All 17 patients at 3 months of follow up were on mirabegron 50 mg daily and was tolerated well. Post-treatment, HR ranged between 60 and 110 bpm; BP ranged between 107/55 and 142/84 mmHg; and PVR ranged between 12-285 mls. Three of the total number of patients developed adverse effects, which included hypertension, recurrent UTIs, and dry mouth respectively, and the medication was ceased as a result.

Fig 1. Number of patients on mirabegron and clinical response to treatment



## Discussion

In our cohort, 65% of patients who was commenced on mirabegron showed improvement in their OAB symptoms. Two thirds of these patients failed to response or develop intolerance to previous therapy. Therefore, without availability of mirabegron as another option for OAB management, symptoms may be left untreated in these patients.

More than 40% of these patients had a history cognitive impairment and therefore antimuscarinic was relatively contraindicated given the anticholinergic burden. Mirabegron provides a good alternative treatment choice in this particular cohort and is shown to be well tolerated.

Given the provision of a hospital subsidised prescription, we better advocate for our patients to fully appreciate the effects of mirabegron for management of OAB in the lower socioeconomic.

Mirabegron was well tolerated at 50 mg daily dosing in our cohort without significant adverse effects. Mirabegron improved storage symptoms in 3 patients with lower urinary tract symptoms secondary to prostatomegaly with the addition to tamsulosin and dutasteride.

## Conclusions

Mirabegron is effective in older persons with OAB symptoms and in those who have failed previous therapy. There is low incidence of adverse effects experienced. Mirabegron is preferred in the management of OAB symptoms for older population with multiple comorbidities and cognitive impairment given its tolerability profile.

## References

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