Pharmacotherapeutic report, summary
Mirabegron (Betmiga®) for the indication "overactive bladder syndrome"

Recommendation CVZ dated 18-10-2013, based on an evaluation by the WAR (Scientific Advisory Committee)

The WAR approved the pharmacotherapeutic report of the medicine mirabegron (Betmiga®). Its therapeutic value was determined via comparison with tolterodine (muscarinic receptor antagonist). They reached the following conclusions:
- the therapeutic value of mirabegron for the symptomatic treatment of urgency, increased micturition frequency and/or urgency incontinence, as may occur in adult patients with overactive bladder syndrome, is equal to that of tolterodine.

Medicine. Mirabegron 50 mg tablet.
Registered indication. "Symptomatic treatment of urgency, increased micturition frequency and/or urgency incontinence as may occur in adult patients with overactive bladder (OAB) syndrome".
Posology. 50 mg once daily.
Mechanism of action. Mirabegron is a selective beta-3-adrenoceptor agonist and there are indications that mirabegron enhances urine storage function by stimulating beta-3-adrenoceptors in the bladder. Sympathetic nerve stimulation predominates during the urine storage phase, when urine accumulates in the bladder. Noradrenaline is released from nerve terminals, leading predominantly to beta adrenoceptor activation in the bladder musculature, and hence bladder smooth muscle relaxation.

Summary of the therapeutic value
Intended effects. In three clinical studies mirabegron was more effective than placebo on the co-primary efficacy endpoints (mean number of incontinence episodes per 24 hours and mean number of micturitions per 24 hours) and the most important secondary endpoints (percentage of responders). The conclusion based on direct and indirect comparisons is that the favourable effects of mirabegron are comparable with those of tolterodine.
Unintended effects. There are no clinically relevant differences between mirabegron and tolterodine. Frequently reported unintended effects during treatment with mirabegron are tachycardia and urinary tract infections. Frequently reported unintended effects during treatment with tolterodine are a dry mouth and reduced cognitive functioning in the elderly. In general, the side effects of both medicines are mild to moderate in severity. Furthermore, in a direct comparative study the percentage of patients who discontinued treatment with mirabegron due to adverse events was comparable to the percentage of patients who discontinued treatment with tolterodine due to adverse events.
Experience. Experience with mirabegron is limited, while ample experience has been gained with tolterodine.
Applicability. There are no major differences in applicability between mirabegron and tolterodine.
Ease of use. Similarly, to tolterodine SR 4 mg, mirabegron 50 mg should be taken once daily.
Final conclusion on therapeutic value. The therapeutic value of tolterodine for the symptomatic treatment of urgency, increased micturition frequency and/or urgency incontinence as may occur in adult patients with overactive bladder syndrome, is equal to that of tolterodine.

*The original text of this excerpt from a **WAR-Report** of CVZ was in Dutch. Although great care was taken in translating the text from Dutch to English, the translation may nevertheless have resulted in discrepancies. Rights may only be derived on the basis of the Dutch version of CVZ's WAR-Report. Furthermore, CVZ points out that only the summary of this report was translated. A proper understanding of all relevant considerations and facts would require familiarity with the Dutch version of this report, including all appendices.*