

3 YEARS' EXPERIENCE OF HIGH ADHERENCE RATE OF MIRABEGRON IN PATIENTS WITH OVERACTIVE BLADDER IN JAPAN: COMPARISON BETWEEN GENDER, AND BETWEEN SINGLE AND COMBINED PHARMACOTHERAPIES.

Hypothesis / aims of study

Anti-cholinergic drug therapy for overactive bladder (OAB) is associated with improvements in symptoms and quality of life, but the short- and long-term adherence and persistence is suboptimal [1]. A study of US Medicaid patients found that only 32-44% of those prescribed OAB medications (anti-cholinergic) continued treatment beyond 30 days, eventually declining to a 5-9 % persistence rate at 1 years [2]. Mirabegron (MI) is the first β_3 -adrenoceptor agonist to enter clinical practice, and has been approved for the treatment of symptoms of OAB in countries including Japan, the USA, Europe, Canada, and Australia.

Recent study proved that combination therapy with MI and an antimuscarinic agent such as solifenacin may provide an attractive therapeutic option to maximize efficacy and minimize the burden of adverse event (AE)s[3]. In Japan, MI has been launched on September 2011, hence, we have more than 3 years' experience of prescription.

The aims of this study were to analyse the adherence rate of MI in Japanese patients with OAB, to compare the persistence rate between male and female, and to compare single and combined pharmacotherapies.

Study design, materials and methods

Between September 2011 and December 2014, 835 Japanese patients with OAB were treated with MI in a private Urology outpatient clinic in Yamanashi Prefecture, Japan. Retrospective chart review was performed including several parameters (IPSS, OABSS [Urology, 68:318, 2006.]). Data were analysed using Student's t-tests, or Kaplan-Meier estimate and Cox-Mantel test.

Results

- 1) Age: Among 835 Japanese patients with OAB, 67% (559) and 33% (276) were male and female, respectively. Average age were 73.8, 73.4, and 74.7 years old in total, male and female patients, respectively. Eighty-two % (682) were over 65 years old, and 18% (153) were under 65 years of age. Among age group of decades, 70 to 80 years were highest incidence in total, male and female patients, followed by 80 to 90 years old, then 60 to 70 years old.
- 2) Types of pharmacotherapies: Solo-administration of MI were 42% (234), and 60% (177) in male and female patients groups, respectively. Patients administered with combination of MI and alpha1-blocker were 45% (252) in male group, and patients administered with combination of MI and anti-cholinergic were 36% (99) in female group.
- 3) Change in OABSS and number of nocturia: change from baseline to 3 months administration of MI could be analysed in 79 male patients, and 51 female patients. Total OABSS improved in both male and female patients ($P<0.01$). Mean number of nocturnal micturition improved in both male and female patients ($P<0.01$).
- 4) Persistence rate of MI: Overall rate of persistence of MI were 50%, 42.6%, 35.6%, and 33.0%, at 7months, 12months, 24months, and 36months, respectively. Rate of persistence of MI in male were 44%, 35.8%, and 34.2%, at 12months, 24months, and 36months, respectively. Rate of persistence of MI in female were 39.1%, 34.6%, and 31.6%, at 12months, 24months, and 36months, respectively (Figure 1).
- 5) Persistence rate and types of pharmacotherapies (solo and combinations): Rate of Persistence of MI-solo were 23.9%, 19.6%, and 19.0% at 12months, 24months, and 36months, respectively. Rate of MI with alpha-1 blocker in male patients were 49.8%, 38.1%, and 38.1% at 12months, 24months, and 36months, respectively. Rate of MI with anti-cholinergic in female patients were 70.9%, 62.3%, and 56.7% at 12months, 24months, and 36months, respectively (Figure 2).

Interpretation of results

Persistence rate of MI in our series seems to be higher than previous reports of anti-cholinergic. Persistence rate of MI are similar between male and female, and is significantly higher in combination therapies (male with alpha1-blocker, and female with anti-cholinergic) than MI solo-treatment.

Concluding message

MI has been well accepted and tolerated as a therapy for male and female OAB patients in Japan. Although clinical evidence for combination of MI and other drugs are not enough, simultaneous use of MI and anti-cholinergic might be an effective and safe treatment for female patients, and triple combination of MI, alpha1-blocker, and anti-cholinergic might be a good option for male OAB patients.

Figure 1. Percentage of Male and Female Patients Remaining Mirabegron(MI) (Kaplan-Meier, 2011.9~2014.12)

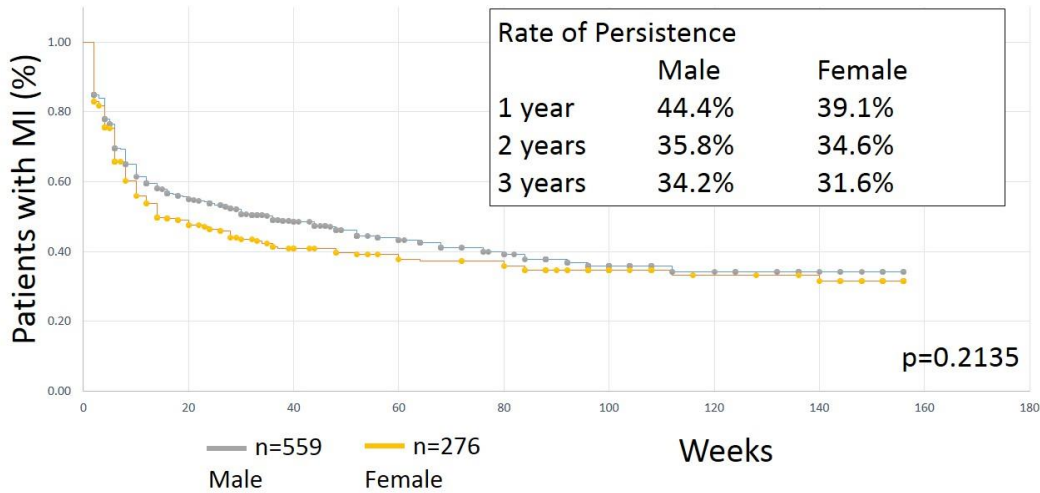
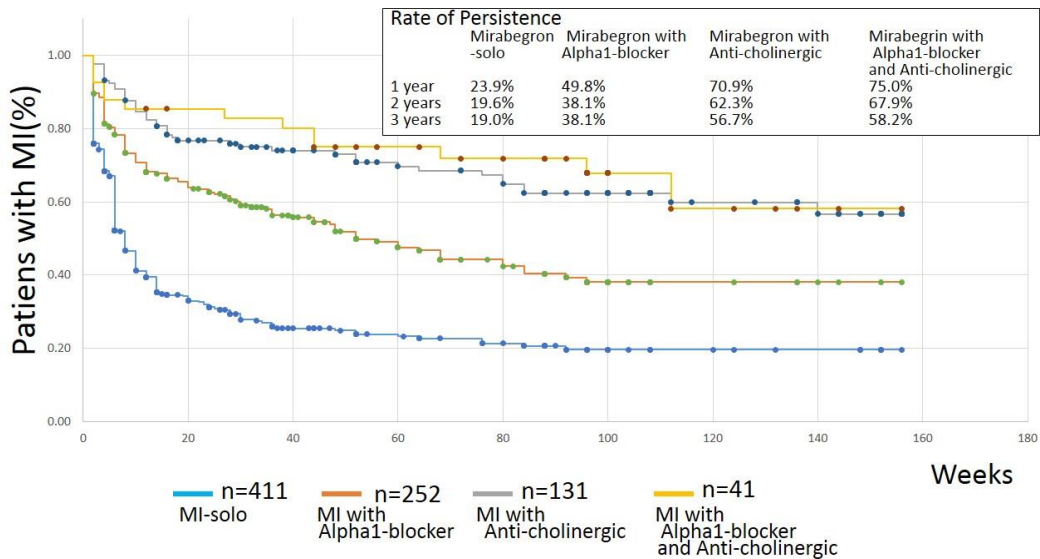


Figure 2. Percentage of Patients Remaining Mirabegron(MI) (Solo-, or Combination)



References

- 1) Basra, R., Wagg, A., Chapple, C., et al.: A review of adherence to drug therapy in patients with overactive bladder, BJUI, 102: 774-779, 2008.
- 2) Shara, F.T, Clune, S., Gu, A., et al., : Persistence with overactive bladder pharmacotherapy in a Medical population, Amer J Manag Care, 11 (Suppl): S121-S129, 2005.
- 3) Yamaguchi, O., Kakizaki, H., Homma, Y., et al.: Safety and efficacy of mirabegron as add-on therapy in patients with overactive bladder treated with solifenacin: a postmarketing, open-label study in Japan (MILAI study), BJUI, 2015 (in press).

Disclosures

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