39

Hordijk I[1], Blanker M[1], Hak E[2]
1. *University Medical Center Groningen, department of General Practice,* ***2.*** *University of Groningen, Groningen Research Institute of Pharmacy*

PRESCRIPTION PATTERNS OF ALPHA-BLOCKERS FOR MALE LOWER URINARY TRACT SYMPTOMS IN DUTCH MEN.

Hypothesis / aims of study

Alpha-blockers are the first choice of treatment for male LUTS. The Dutch guideline for general practitioners (GPs) *"Male LUTS"* recommends to discontinue α-blockers in case of symptom relief after 12-26 weeks [1]. Symptoms should be evaluated after discontinuation. No evidence is given to support this advice. In contrast, the Dutch guideline for urologists does not support this recommendation, whereas in the EAU guideline the discontinuation of α-blockers is only considered in combination-therapy [2]. It is unclear if these differences between the GP and urologists guidelines lead to a different pattern in the use of α-blockers. In this study, we examined prescription patterns for α-blockers. We were particularly interested if users had a period of discontinuation within the first year of treatment, and if different patterns were present between prescriptions by GPs and urologists.

Study design, materials and methods

We performed a retrospective inception cohort analysis using data from the IADB.nl prescription database [3]. This widely researched database contains all dispensed prescriptions of 60 Dutch community pharmacies in the Netherlands [3]. Twenty-year data from more than 1.2 million patients with >100 million prescriptions are included in this database. We selected data from men ≥ 30 years of age with a first α-blocker prescription between 2006 and 2013. We defined a first prescription to occur if such prescriptions were absent in the 2 preceding years. Information on the first prescriber was categorized as GP or specialist/urologist. For all included patients, we collected all α-blocker prescriptions and calculated the duration of drug use in days. Patients were evaluated at 2, 6, 13, 26, 39 and 52 weeks of treatment. If the total duration (in days) was less than these periods, patients were classified as "discontinued" and if the total duration was than these periods as "current users" for each point in time. For "current users", we examined if the patient had a period of discontinuation. This was defined as missing 15 tablets or more in the preceding period. Current users could then be classified as "with gap in previous period" or "without gap in previous period". Percentages of patients who never had a period of discontinuation were calculated for the overall population, separately for patients from GPs or urologists, and within age groups. Differences were compared using the Chi^2 test, a p-value <0.05 was considered statistically significant.

Results

In the database, 373,433 α-blocker prescriptions were available for 23,106 men. Within this group, 12,191 men received a new α-blocker prescription between 2006 and 2013. In 44.5% of these men, an urologist was the first prescriber (GP in 55.5%). Overall, mean age at first prescription was 65.3 years, 65.8 and 64.6 years for GPs and urologists, respectively. The overall mean duration of α-blocker use was 548 days with a median of 210 days. Within 2 weeks of treatment 14.7% and 10.9% of GP's and urologist's patients respectively, discontinued therapy. Another 15% discontinued within 2-6 weeks. After 52 weeks 37% of men were current users, 39.7% of the GP's patients and 33.9% of the urologist's patients.Of all current users at 13 weeks, 30% (n = 2,294) discontinued α-blocker use in the following period, of which 29.7% (681) restarted. Of all current users at 26 weeks, 22% (1,348) discontinued α-blocker use in the following period, of which 38.1% (513) restarted.

Table 1 shows the cumulative percentage of patients who have had a period of discontinuations according to age categories. Of all current users at 1 year after initiation, 30% had one or more periods of discontinuation. The differences between GP's and urologist's patients were not significant, nor clinically relevant. Almost 50% of patients in the youngest group had a period of discontinuation. For the oldest group, this was less than 25%. The differences between the age categories were significant at each point in time (chi-square, p<0.05).

Figure 1. Patients who discontinued and continued (with or without gap) α-blocker use

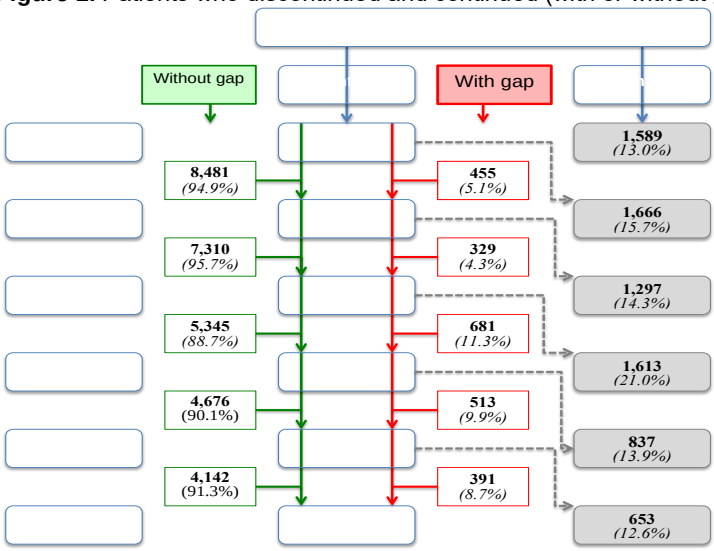

Table 1. Cumulative percentages of patients with a period of discontinuation overall and according to age

Time after starting α-blocker treatment	Overall	30-49 years	50-59 years	60-69 years	70-79 years	>80 years
6 weeks	**5.1%**	**7.2%**	**6.1%**	**4.6%**	**4.7%**	**4.6%**
	455/8,936	45/629	107/1764	137/2,970	110/2,348	56/1,225
13 weeks	**9.9%**	**17.0%**	**12.7%**	**8.5%**	**9.0%**	**5.4%**
	754/7,639	76/446	185/1462	220/2,581	186/2,070	87/1,080
26 weeks	**20.2%**	**35.2%**	**25.8%**	**18.9%**	**18.2%**	**16.1%**
	1219/6,026	96/273	281/1089	391/2,067	314/1,729	140/868
39 weeks	**26.1%**	**45.8%**	**32.1%**	**24.1%**	**25.2%**	**19.8%**
	1356/5,189	97/212	299/931	429/1,777	381/1,513	150/756
52 weeks	**29.6%**	**46.2%**	**35.4%**	**29.3%**	**27.8%**	**22.8%**
	1342/4,536	79/171	278/786	464/1,586	369/1,326	152/667

Interpretation of results

Almost two third of all men who started α-blocker treatment discontinued therapy within the first year. Approximately 30% of men who had been using α-blockers for at least one year had a period of discontinuation. These numbers were highest in the youngest age group and lowest in the oldest age group. The prescription patterns did not differ between urologists and GPs. That is, we found no statistically significant nor a clinically relevant difference according to the first prescriber.

This study lacks information on the indications for α-blocker therapy. Especially short-term use may have been indicated for urolithiasis, or indwelling-catheter usage. Furthermore we do not know who initiated a period of discontinuation: the patient or the prescriber.

Concluding message

The overall discontinuation rate in the first year was high, with only 37% of new α-blocker users on active treatment after one year. Approximately one third of the patients, who were still using α-blockers 1 year after initiation, have had a period of discontinuation during the entire treatment period. Despite the different recommendations in guidelines for urologists and GPs in the Netherlands, we did not find a relevant difference in (temporary) discontinuation rates between urologists and GPs.

References

1. Blanker MH, et al Summary of the NHG practice guideline 'Lower urinary tract symptoms in men'. Ned Tijdschr Geneeskd. 2013;157(18):A6178.
2. Gratzke C, et al. EAU guidelines on the assessment of non-neurogenic male lower urinary tract symptoms including benign prostatic obstruction. Eur Urol. 2015;67:1099-109.
3. Visser ST, et al. The population-based prescription database IADB.nl: its development, usefulness in outcomes research and challenges. Expert Rev Pharmacoecon Outcomes 2013;13:285-292

Disclosures

Funding: none **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** retrospective cohort study. **Helsinki not Req'd:** not applicable. **Informed Consent:** No