ADELF/EPITER meeting. Brussels, 12-14 September 2012.

PERSISTENCE WITH FIRST-LINE GLAUCOMA THERAPY

Manon Belhassen[1] (MSc), Idlir Licaj[1] (MSc, PhD), Laurent Laforest[1] (MD, PhD), Eric Van Ganse[1] (MD, PhD),

[1] CHU Lyon, Unité de Pharmacoépidémiologie, Faculté d'Odontologie, Université Claude-Bernard Lyon1, 11, rue Guillaume Paradin, 69372 LYON Cedex 08, France

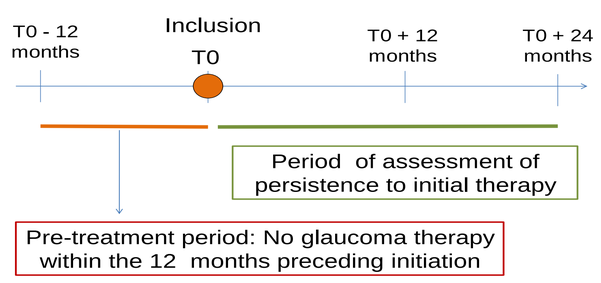
BACKGROUND

- Glaucoma is a preventable cause of blindness, provided that therapy is used regularly.
- Hence, a good understanding of patients' adherence to therapy is critical to improve disease management.
- Early persistence to first-line glaucoma therapy is poorly documented.
- We verified in claims databases to what extent first-line glaucoma therapy is interrupted within the 12 months following initiation, and how this interruption varies according to the different first-line therapeutic classes.

METHODS

- A sample of patients, newly-treated with glaucoma therapy between 2005 and 2008, was selected from the French national claims database (EGB).

Figure 1: Study design

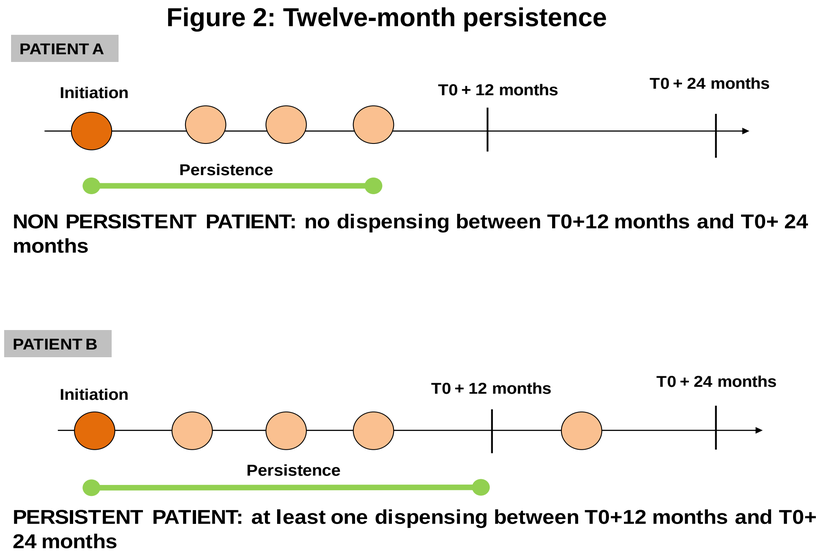


- Glaucoma therapy was identified with the Anatomical Therapeutic Chemical classification (S01E).

Twelve-month persistence

- Analyses on persistence were restricted to patients who were initiated chronic therapy (prostaglandins, beta-blockers, combined beta-blockers and topical carbonic anhydrase inhibitors)
- Twelve-month persistence was defined for a given patient by a dispensing of the first-line drug class (≥ 1 dispensing) between 12th and 24th months following initiation (Figure 2). Twelve-month persistence was studied according to first-line drug classes, and between prostaglandins. First, percentages of persistent patients were compared between groups. Then, survival analyses were conducted (Kaplan-Meier method).

Figure 2: Twelve-month persistence



Replacement / added-on therapy

- Among persistent patients, the addition of second-line therapeutic class of glaucoma therapy (acute or chronic) was defined by the presence of any additional anti glaucoma drug class (acute or chronic) within the 12 months following initiation (at least one dispensing).
- Among non persistent patients, the replacement of the initial therapy by a second-line therapeutic class was defined by the presence of any additional anti glaucoma drug class within the 12 months following initiation (at least one dispensing).

RESULTS

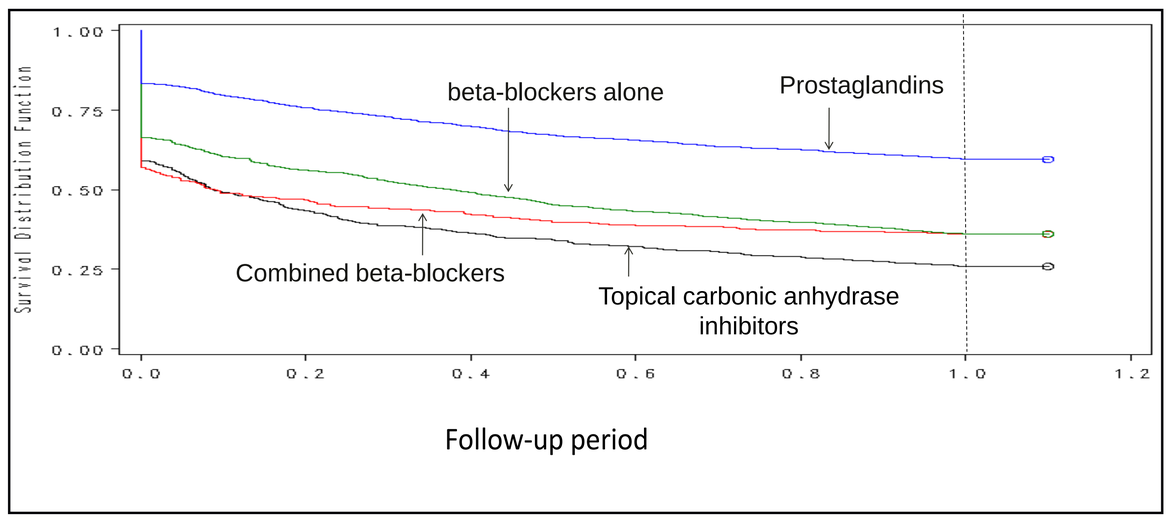
1. Descriptive results

- Among 8673 patients initiated with glaucoma therapy (mean age=65 year-old, 60% females), 5331 (62%) received at initiation a chronic treatment in monotherapy: prostaglandins (27%), beta-blockers (20%), topical carbonic anhydrase inhibitors (9%) and combined beta-blockers (6%).

2. Twelve-month persistence according to first-line therapy

- **2.1 Comparison between the different drug classes:**
- Overall, 12-month persistence to first-line chronic therapy was low, with salient differences between drug classes (p<0.0001): Percentages of persistent patients varied from 59% with prostaglandins to 26% for topical carbonic anhydrase inhibitors.
- These findings were confirmed by Kaplan-Meir analyses

Figure 3: Comparison of 12-month persistence between chronic drug classes (n=5,531)



- **2.2 Number of quarters under initial drug class (among persistent patients)**

Persistent patients initiated by a prostaglandin presented significantly more quarters covered by the initial drug class during the 8 quarters following inclusion than those who received another drug class (Table 1)

Table 1. Number of quarters covered by the initial drug class during the first 24 months after initiation (n=2589)

	n*	2	3 – 4	5 - 6	7 - 8	p
		%**	%**	%**	%**	<0.0001
Prostaglandins	1372	3.1%	7.4%	15.9%	73.5%	
beta-blockers alone	615	5.0%	8.0%	20.6%	66.3%	
beta-blockers (fixed combination)	182	3.3%	14.8%	20.3%	61.5%	
Topical carbonic anhydrase inhibitors	212	9.9%	12.7%	22.2%	55.2%	

* n : Total number of patients initiated by the drug class
** % of patients according to the number of quarters covered for a therapeutic class

3. Addition and replacement of therapy

- **3.1 Among persistent patients**

Overall, the addition of another therapy was not common among persistent patients, except for combined beta-blockers (Table 2).

Table 2. Addition* of a second-line therapy** among persistent patients, during the first 12 months following initiation

	≥ Addition one N (%)
Prostaglandins	155 (11.3)
beta-blockers alone	56 (9.1)
beta-blockers (fixed combination)	61 (33.5)
Topical carbonic anhydrase inhibitors	36 (17.0)

* At least one dispensing of a second-line therapy within the 12 months after initiation
** Any second-line therapy

- **3.2 Among non persistent patients**

About one in four non persistent patient received a second-line drug class within the 12 months following inclusion, without noticeable differences between drug classes (Table 3).

Table 3. Replacement* of initial drug class by a second-line therapy** during the first 12 months following initiation among non persistent patients

	≥ Replacement one N (%)
Prostaglandins	261 (27.9)
beta-blockers alone	283 (26.0)
beta-blockers (fixed combination)	81 (25.1)
Topical carbonic anhydrase inhibitors	131 (21.6)

* At least one dispensing of a second-line therapy within the 12 months after initiation
** Any second-line therapy

CONCLUSIONS

- Our findings confirm the low early persistence of first-line therapy, with better results for prostaglandins.
- Proportion of persistent patients who were added a second-line therapy varied with the initial drug class, while replacement of therapy was relatively constant among non persistent patients.

Acknowledgments: this study was supported by a non conditional grant from Pfizer France

Contact: Dr Eric Van Ganse, eric.van-ganse@univ-lyon1.fr