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COMPARISON OF PERSISTENCE AMONG THERAPIES FOR OVERACTIVE BLADDER: A RETROSPECTIVE PHARMACY CLAIMS ANALYSIS

Hypothesis / aims of study

To evaluate persistence for four commonly used therapies for overactive bladder (OAB)

Study design, materials and methods

Prescription pharmacy claims for patients prescribed four common OAB therapies in 2002 and 2003 were extracted from a private, national pharmacy benefit management organization. To be included in the analyses, study subjects had to be continuously eligible, have no OAB treatment in the six months prior to initiating OAB treatment, and have twelve months of utilization data between January 2002 and December 2003 following initiation of OAB therapy. We examined two separate outcomes: (1) persistence on the initial OAB therapy only ("Initial OAB"), and (2) persistence of patients on any of the four OAB therapies ("Any OAB"). Persistence was defined as the time from treatment initiation to a gap in therapy of 30 days or more. The maximum persistence possible for any study subject was 365 days.

The four cohorts in this analysis were not randomized, thus it was clear that differences in demographics, insurance coverage, and comorbidity status were likely to occur among them. Since these factors may affect persistence, we created propensity weights for cohort membership [1] to adjust for this effect. These weights were used to create adjusted pairwise comparisons for persistence that removed the bias associated with these baseline differences.

Results

Of the 24,594 patients identified, 10% were initially prescribed Detrol, 35% Detrol LA, 36%, Ditropan/generic oxybutynin, and 18% Ditropan XL. Patients on long-acting medications had a longer mean persistence for "Initial OAB" (131 and 127 days for Detrol LA and Ditropan XL respectively, followed by Detrol and Ditropan/oxybutynin at 105 and 89 days, respectively) (Figure 1). The mean persistence patterns observed for the "Any OAB" measure were similar (Detrol LA at 137 days and Ditropan XL at 136 days, followed by Detrol and Ditropan/oxybutynin at 126 and 95 days, respectively) (Figure 2). All pairwise differences for both "Initial OAB" and "Any OAB" were statistically significant except for the differences between the two long-acting medications.

Figure 1. Mean Persistence on "Initial OAB" Therapy by Cohort

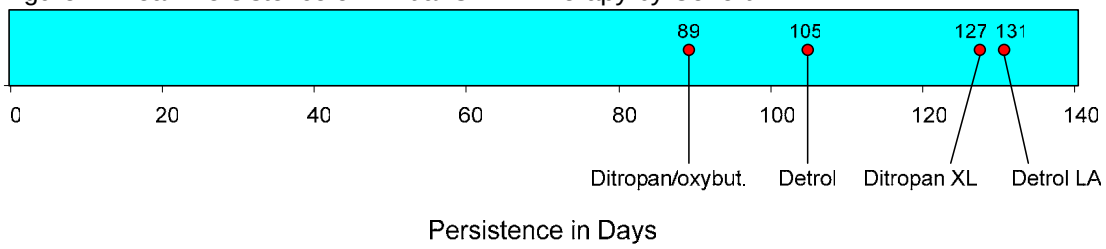
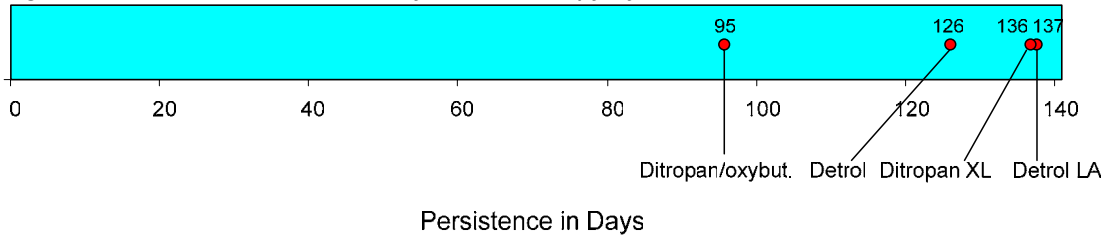


Figure 2. Mean Persistence on "Any OAB" Therapy by Cohort



Adjusted pairwise differences for “Initial OAB” and “Any OAB” are presented in Tables 1 and 2. As was observed for the unadjusted pairwise differences, the long-acting medications had the longest mean persistence when compared to the short-acting medications, and the small differences in persistence between them were not statistically significant. For “Initial OAB”, Detrol LA’s adjusted differences from Detrol and Ditropan were comparable (33 and 35 days, respectively), whereas Ditropan XL’s difference from Ditropan/generic oxybutynin was twice as high as from Detrol (62 vs. 27 days, respectively). For the “Any OAB” measure, the pattern of larger differences from the Ditropan/generic oxybutynin appears for both long-acting medications, although it remains more pronounced for Ditropan XL. Multivariable analysis illustrated that regardless of cohort, younger ages were generally associated with decreased persistence, as was female gender, but to a lesser extent.

Table 1: Difference* Matrix for “Initial OAB” Adjusted Pairwise Comparisons

Persistence for This Treatment	*...Is How Much Better than This Treatment (days)?*			
	Detrol LA	Ditropan XL	Detrol	Ditropan/oxy.
Detrol LA		4	**33	**35
Ditropan XL			**27	**62
Detrol				**11
Ditropan/oxy.				

*Value of each cell is adjusted mean persistence of row header – adjusted mean persistence of column header.
**Difference statistically significant.

Table 2: Difference* Matrix for “Any OAB” Adjusted Pairwise Comparisons

Persistence for This Treatment	*...Is How Much Better than This Treatment (days)?*			
	Detrol LA	Ditropan XL	Detrol	Ditropan/oxy.
Detrol LA		3	**25	**44
Ditropan XL			**16	**46
Detrol				**21
Ditropan/oxy.				

*Value of each cell is adjusted mean persistence of row header – adjusted mean persistence of column header.
**Difference statistically significant.

Interpretation of results

All four commonly used OAB medications were associated with a short duration of persistence, with the most persistent cohort exhibiting a mean persistence on therapy of approximately 4.5 months (median 2.2 months). While the long-acting medications exhibited somewhat better persistence when compared to the short-acting medications, the increased persistence accounts for no more than 1.5 months on average. Given the small difference between the mean “Initial OAB” and “Any OAB” persistence (6 to 21 days), switching from the initial therapy to another medication within 30 days did not appear to be a widespread phenomenon.

Concluding message

In general, this cohort of patients prescribed medications for OAB exhibited poor persistence and discontinued treatment within a few months of starting therapy, on average. The reasons for this poor persistence were not evaluated in this analysis, and will require further research.

References

1. Estimation of Causal Effects using Propensity Score Weighting: An Application to Data on Right Heart Catheterization. Health Services and Outcomes Research Methodology 2001; 2(3-4): 259-278.

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