Assessment of Prescribing Practices in Overactive Bladder Pharmacotherapy across Different Specialties of India: A Prescription Trend Analysis

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INTRODUCTION

International Continence Society (ICS) estimates that 12.8% of women and 10.8% of men suffer from OAB; the prevalence of frequency, urgency, and urge incontinence (UI) rises with age [1][2]. Behavioral and self-control training are regarded as first-line options for reducing UI in patients. Antimuscarinics or β3 adrenoceptor agonists are popular treatments for OAB if behavioral changes fail to alleviate symptoms [3]. In India, the most commonly prescribed OAB medications are Solifenacin, Oxybutynin, Tolterodine, Darifenacin, Trospium, and Mirabegron [4].

AIM

To assess the temporal prescription patterns of overactive bladder (OAB) pharmacotherapy based on the prescription trend analysis amongst Indian clinicians.

METHOD

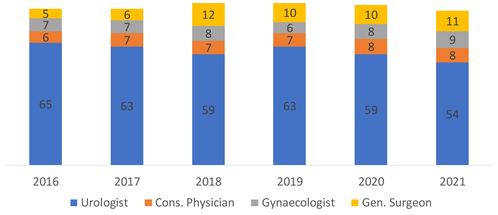
- From August 2016 to August 2021, IQVIA Medical Audit Data of urological preparation prescription rates for primary care physicians in India were used.
- The annual prescription data of IQVIA medical audit for urological preparations, including antimuscarinics and beta-3 adrenoceptor agonists, were analyzed. The medicines prescribed were categorized into these subgroups: Solifenacin, Darifenacin, Tolterodine, Oxybutynin, Trospium & Mirabegron.
- We used software Microsoft Excel 2013 to perform statistical analysis.

- **Ethics considerations**

The data used had no identifiers for the patients. So current study does not require Ethical Committee approval.

RESULTS

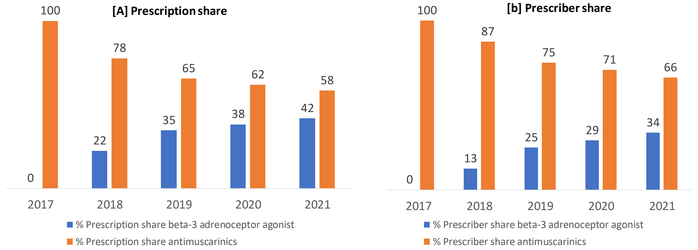
[A]



[A] Specialty-wise prescription share for OAB drugs in India (2016-2021)

- Urologists remain as a leading specialty prescribing OAB drugs

[B]



[B] % Prescription and Prescriber share of beta-3 adrenoceptor agonist and antimuscarinics (2017-2021

- Prescription share for antimuscarinics were 100% in 2017 & 58% in 2021 whereas for mirabegron, it was 0% in 2017 & 42% in 2021. Prescriber share reflects a similar trend

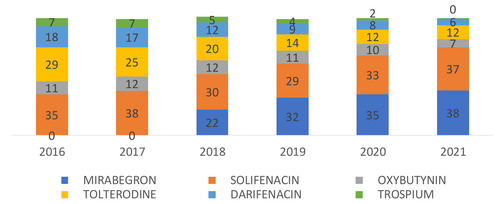
[C]

Drugs for OAB	2016	2017	2018	2019	2020	2021
Mirabegron	0	0	22	35	38	42
Solifenacin	36	37	28	31	33	33
Oxybutynin	19	20	17	12	10	7
Tolterodine	18	19	15	9	10	9
Darifenacin	25	21	17	13	9	9
Trospium	2	2	1	1	0	0

[C] Molecule-wise % prescription share of OAB drugs in India (2016-2021)

- Greater relative prescription loss at antimuscarinics indicates the change in molecular preference in OAB management

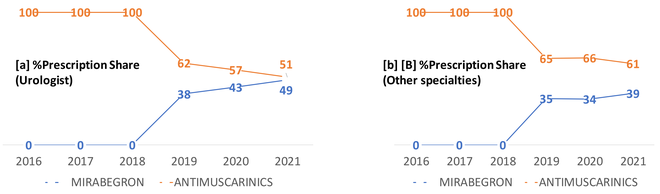
[D]



[D] Prescriber share of OAB drugs at Urologist specialty (2016-2021)

- Solifenacin was the preferred molecule before the launch of mirabegron

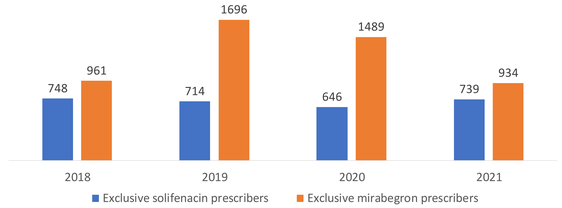
[E]



[E] % Prescription share of antimuscarinics and mirabegron at urologist and other specialties (2016-2021)

- OAB medication preference by urologists are shifting from antimuscarinics to mirabegron. Other specialties continue to prescribe antimuscarinics as a preferred drug for OAB

[F]



[F] Exclusive prescriber (urologist) analysis for Solifenacin and Mirabegron

- The decline in solifenacin exclusive prescribers and gain in mirabegron exclusive prescribers show the molecular shift in urologist's prescription preference

CONCLUSIONS

- Urologists remained a top prescribing specialty for OAB drugs, although prescription share increased at surgeons and consultant physicians. OAB medication preference by urologists are shifting from solifenacin to mirabegron. Other non-urologist specialties continue to prescribe antimuscarinics as a preferred drug for OAB.
- Antimuscarinics' prescription share shows a downtrend due to the risk of side effects and lower therapy adherence compared with mirabegron, which is comparatively better tolerated & equally effective in OAB management. Across Indian clinicians, mirabegron emerges as a promising treatment option for overactive bladder. Recently approved fixed-dose combination of antimuscarinic, solifenacin, and beta-3 adrenoceptor agonist, mirabegron is the newer approach for refractory OAB management in India.
- Results of this study could further help clinicians, to design the optimum treatment approach in OAB patients according to their need, which can help to lowers antimuscarinic side effects, improves treatment adherence and improves patient's QoL.

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