The Professional Medical Journal
www.theprofesional.com

DOI: 10.29309/TPMJ/2019.26.07.3795

ORIGINAL PROF-0-3795

EFFICACY OF ANTICHLONERGIC DRUGS IN IDIOPATHIC OVERACTIVE BLADDER.

1. MBBS, FCPS
Consultant
Department of Urologist
Govt Kotkhawaja Saeed Teaching Hospital, Lahore.
2. MBBS
Resident Internal Medicine
Jinnah Postgraduate Medical Center, Karachi.
3. MBBS
Resident Internal Medicine
Jinnah Postgraduate Medical Center, Karachi.

Correspondence Address:
Dr. Muhammad Zahid
Department of Urologist
Govt Kotkhawaja Saeed Teaching Hospital, Lahore.
zahid.urologist@gmail.com

Article received on:
12/09/2018
Accepted for publication:
30/12/2018
Received after proof reading:
25/06/2019

Muhammad Zahid[1], Faizan Shaukat[2], Amber Tahir[3]

ABSTRACT… Symptoms of overactive bladder include urgency, frequency, and urge incontinence, with or without noctiuria. Symptoms are common in adults. The two main treatment options for overactive bladder syndrome are bladder retraining and anticholinergic drugs. **Study Design:** Cross sectional study. **Setting:** Urology Department, Kot Khawaja Saeed Hospital, Lahore. **Period:** January to June 2017. **Materials and Methods:** Eighty patients were enrolled after informed consent. All patients were subjected to 5mg solifenacin succinate for three months. International Consultation on Incontinence Questionnaire-Urinary Incontinence (ICIQ-UI) was utilized to assess patient symptoms. **Results:** There 56 males (70%) and 24 female (30%) with mean age of 43 ± 1.6 years. Efficacy of solifenacin was found in 61 cases out of 80 patients. On first visit 19 (31%) patients were cured, 17 (28%) on second month follow up and 25 (41%) were cured on third month follow up. **Conclusion:** Solifenacin has significant role in managing patients with overactive bladder. It has a relatively safe side effect profile.

Key words: Muscarinic Receptor Antagonists, Overactive Bladder, Solifenacin Succinate, Urinary Urgency, Urinary Incontinence.

Article Citation: Zahid M, Shaukat F, Tahir A. Efficacy of antichlonergic drugs in idiopathic overactive bladder. Professional Med J 2019; 26(7):1183-1186.
DOI: 10.29309/TPMJ/2019.26.07.3795

INTRODUCTION

Overactive bladder (OAB) may present with symptoms such as urgency (a compelling desire to urinate), frequency (urinating > 7 times a day), nocturia (urinating more than once in the middle of the night), and urge incontinence (urgency followed by involuntary urinary leakage). There is underlying reduced maximum cystometric capacity which is the volume of bladder at which one feels the need to urinate immediately and cannot delay micturition anymore. Furthermore, detrusor contractions cannot be inhibited voluntarily. When such a person has a coexisting relevant neurological condition which has made detrusor overactive; the condition is termed as neurogenic detrusor over activity. All other cases are termed as idiopathic detrusor over activity.

Symptoms of bladder over activity are common in the community. In a study conducted in 6 countries across Europe, the prevalence of OAB was 16.6% with frequency as the most common symptom.[1] In a national survey across United States, the prevalence of OAB in males was 16% and in females 16.9%.[2] Studies have also reported that the prevalence of OAB and severity of its symptoms increase with advancing age.[1-5] around one third of individuals with OAB have urge incontinence. Individuals with neurological conditions such as multiple sclerosis: urinary dysfunction is noted to be more common than neurologically healthy individuals.[6] whether it be only urgency and frequency or noctiuria and leakage; the overall effects of OAB have profound impact on the quality of life.[7] It has been noted that many people do not seek medical help for OAB due to embarrassment and social taboo attached to the condition.[1-5]

The management strategy of OAB includes pelvic floor strengthening and bladder retaining exercises along with muscarinic receptor antagonists. By inhibiting the muscarinic pathway, anticholinergic drugs block or reduce the severity of detrusor muscle contraction. Muscarinic receptor-3 (M3) selectively act on the smooth muscles; hence selective blockers of M3 receptors have adequate affect on the detrusor muscle without giving other

anti-muscarinic affects such as dry mouth or eyes, constipation, and, more rarely, headache or nausea. Various anticholinergic drugs are becoming available. However, their effectiveness is still uncertain. Anticholinergic are still widely used in both primary and secondary care for managing OAB.[8]

The aim of this study is to study the role of selective anti muscarinic receptor solifenacin succinate in patients with OAB.

METHODOLOGY

This was a cross sectional study that was carried out at urology department, Kot Khawaja Saeed Hospital, Lahore. Total numbers of 80 patients were enrolled after informed consent. All patients were subjected to 5mg solifenacin succinate for three months. The symptoms were noted on every follow-up visit (one month apart). International Consultation on Incontinence Questionnaire-Urinary Incontinence (ICIQ-UI) was utilized in this study. Score greater than 6 on was diagnosed as urinary incontinence.

Data was entered and analyzed in computer software SPSS version 20. Quantitative variables like age and clinical presentation was presented in form of frequency and percentages.

RESULTS

There were total 80 cases; of which 56 (70%) were male and 24 (30%) were female cases. The mean±SD age of the patients was 43±1.6 years. All the patients were subjected to the treatment. It was noted that efficacy was found in 61 cases (76.25%) out of 80. Among these, 21 (34.4%) were women and 40 (65.5%) were men. On first visit 19 (31%) patients were cured, 17 (28%) on second month follow up and 25 (41%) were cured on third month follow up. (Figure-1).

The side effects profile as reported by the patients is shown in Table-I.

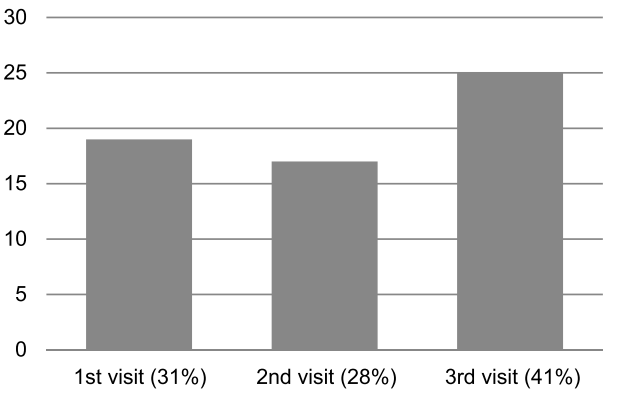

Figure-1. Patient cure per visit by Solifenacin use in overactive bladder

Side Effects	Frequency (%)
Dry Mouth	16 (20%)
Nausea/Dyspepsia	11 (13.75%)
Constipation	12 (15%)
Abdominal Pain	9 (11.25%)

Table-I. Side effects profile of Solifenacin.

DISCUSSION

Almost two-third of the patients was successfully managed for symptoms of overactive bladder with anticholinergic drug therapy. There were more males. Most of the patients required 3 visits i.e., three months of treatment for producing efficacious results. The most common side effect was dry mouth followed by constipation, nausea/dyspepsia, and abdominal pain. As compared to Rana et. al.,[9] our sample had a lower incidence of dry mouth but higher incidence of constipation with use of solifenacin.

Solifenacin has its action against muscarinic receptors with selective activity against M3 receptors. M3 receptors mediate cholinergic transmission of exocrine glands and smooth muscle including urinary bladder, ciliary muscle and salivary glands.[10] Furthermore, solifenacin has shown greater selectivity for bladder smooth muscle than salivary glands.[10]

Various controlled trials have been conducted to support the efficacy of solifenacin 5mg and 10mg once daily in significant improvement of bothersome symptoms of overactive bladder.[11-13]

Urinary urgency, frequency, and incontinence have always been the source of embarrassment, annoyance, and a hassle to the patients. These problems result in patient anxiety, frustration, and social fear. Patients with these symptoms of OAB have been coping through behavioral changes such as reducing daily fluid intake, avoiding longer outdoor trips, travelling only to places where they are sure about restroom availability, wearing incontinence pads and adult diapers, and carrying extra pair of clothes with them in case of a leak episode. All of these factors cause significant anxiety and decrease quality of life of these patients.[14] Solifenacin with its selective activity against urinary bladder muscles has significantly improved the quality of life of these patients.

In conclusion, solifenacin has great potential for patients with symptoms of OAB. It is a relatively safe drug with selective activity against muscarinic receptor subtype M3, hence, reduced side effect profile. Treatment of patients with anticholinergic drug such as solifenacin has role in improving quality of life of people suffering from OAB.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	**Muhammad Zahid**	Research idea an methodology design, construction of questionnaire, manuscript preparation, Final responsibility of the study.	
2	**Faizan Shaukat**	Data collection and data analysis, results preparation, manuscript writing.	
3	**Amber Tahir**	Data collection, literature search, manuscript writing.