

ORIGINAL RESEARCH

Tamsulosin versus estrogen in the treatment of lower urinary tract symptoms in perimenopausal females

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ABSTRACT

Background: The primary cause of lower urinary tract symptoms (LUTS) in perimenopausal women is urethral stenosis. The present study was conducted to compare tamsulosin versus estrogen in the treatment of lower urinary tract symptoms in perimenopausal females. **Materials & Methods:** 90 perimenopausal females between the age group of 45 and 60 years were divided into 2 groups of 45. Tamsulosin was administered to group I, while topical estrogen (0.5%–1%) was applied to the periurethral area to group II. The International Prostate Symptom Score's voiding components were used for clinical follow-up. **Results:** Pre-treatment Qmax in group I was 7.5 and in group II was 7.1 and post-treatment Qmax in group I was 17.4 and in group II was 11.6. The difference was significant ($P < 0.05$). Pre-treatment postvoid residual in group I was 121.3 ml and in group II was 127.2 ml and post-treatment postvoid residual in group I was 35.4 ml and in group II was 108.4 ml. The difference was significant ($P < 0.05$). **Conclusion:** Given its obvious advantages over topical estrogen, tamsulosin ought to be the primary line of treatment for perimenopausal women exhibiting LUTS symptoms.

Key words: tamsulosin, urinary tract, Premenopause

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INTRODUCTION

The primary cause of lower urinary tract symptoms (LUTS) in perimenopausal women is urethral stenosis.¹ Patients with prolonged urine retention have issues with blockage of the bladder outlet and poor detrusor contraction. Catheterization and urethral dilatation are the main therapy choices for these ladies.² Premenopause, which corresponds to the late reproductive period; perimenopause, which is separated into early and late menopausal transition; and postmenopause, which can be either early or late menopause and whose individualization and duration are nonlinear, are the three stages of

menopause. Regular menstrual cycles and rising follicle-stimulating hormone (FSH) levels are hallmarks of the first stage. Variability in the length of the menstrual cycle and elevated FSH levels are characteristics of the second one.³

Women at this point have had at least 60 days of amenorrhea or missing periods, and their FSH levels are still elevated.⁴ A decrease in serum estrogen levels and elevated FSH levels are characteristics of the last stage. This stage is characterized by vasomotor, genitourinary, and emotional symptoms. For example, lower urinary tract symptoms (LUTS) are genitourinary symptoms.⁵ Storage symptoms

(polyuria, nocturia, urinary incontinence, urgency urinary incontinence, mixed urinary incontinence, urinary exertional incontinence, nocturnal enuresis, and continuous urinary incontinence), urinary symptoms (weak urinary stream, intermittent urinary stream, hesitation, straining, and terminal dribble), post-micturition symptoms (feeling of incomplete emptying and post-micturition dribble), and coitus-related symptoms (dyspareunia and vaginal dryness) are all regarded as subjective indicators of changes that women perceive.⁶The present study was conducted to compare tamsulosin versus estrogen in the treatment of lower urinary tract symptoms in perimenopausal females.

MATERIALS & METHODS

The present study consisted of 90 perimenopausal females between the age group of 45 and 60 years reporting to the department with the complaint of voiding LUTS. All gave their written consent to participate in the study.

Data such as name, age etc. was recorded. Patients were divided into 2 groups of 45. Tamsulosin was administered to group I, while topical estrogen (0.5%–1%) was applied to the periurethral area to group II. The International Prostate Symptom Score's voiding components were used for clinical follow-up, while uroflowmetry and postvoid residual (PVR) urine estimates (ultrasonography) were used for objective follow-up. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Assessment of Qmax

Groups	Group I	Group II	P value
Pre- treatment	7.5	7.1	0.58
Post- treatment	17.4	11.6	0.01

Table I, graph I shows that pre- treatment Qmax in group I was 7.5 and in group II was 7.1 and post- treatment Qmax in group I was 17.4 and in group II was 11.6. The difference was significant (P< 0.05).

Graph I Assessment of Qmax

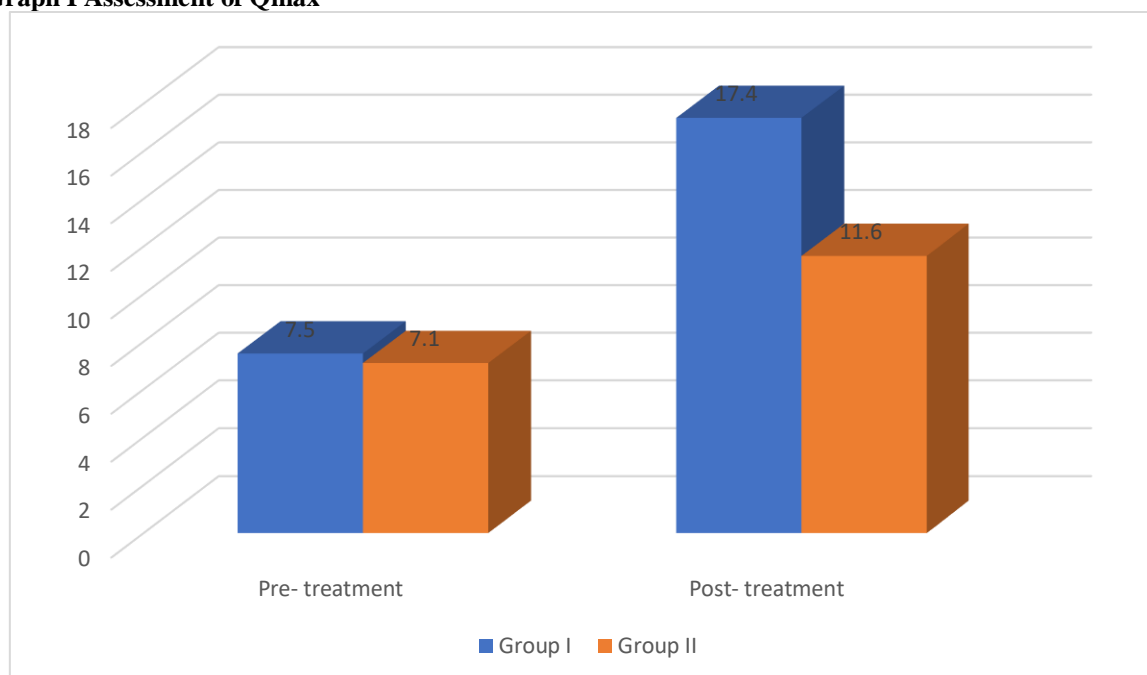
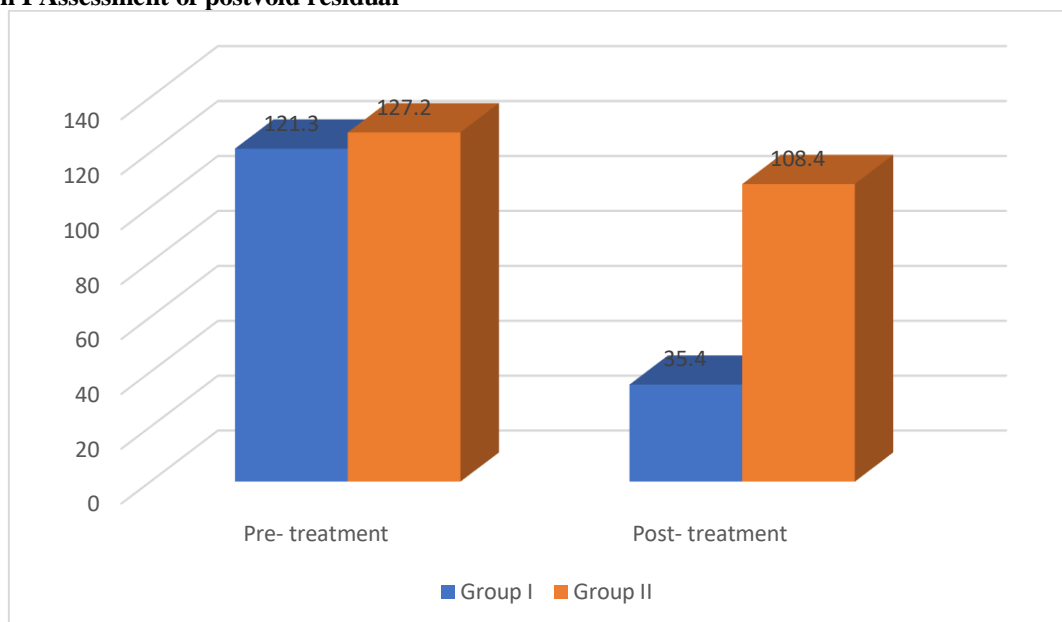


Table II Assessment of postvoid residual

Groups	Group I	Group II	P value
Pre- treatment	121.3	127.2	0.01
Post- treatment	35.4	108.4	0.03

Table II, graph II shows that pre- treatment postvoid residual in group I was 121.3 ml and in group II was 127.2 ml and post- treatment postvoid residual in group I was 35.4 ml and in group II was 108.4 ml. The difference was significant (P< 0.05).

Graph I Assessment of postvoid residual**DISCUSSION**

Women frequently suffer from urinary tract infections (UTIs), which are expensive and typically caused by *Escherichia coli*.⁷ The woman's fecal flora at the time of a UTI episode frequently contains the pathogenic strain of *E. coli*.^{8,9} The "faecal-perineal-urethral" hypothesis for UTI pathogenesis in women has been proposed by this discovery. It states that the host's own fecal flora serves as the direct external reservoir from which *E. coli* strains that cause UTIs arise.^{10,11} The present study was conducted to compare tamsulosin versus estrogen in the treatment of lower urinary tract symptoms in perimenopausal females.

We found that pre-treatment Q_{max} in group I was 7.5 and in group II was 7.1 and post-treatment Q_{max} in group I was 17.4 and in group II was 11.6. Lee et al¹² evaluated the therapeutic effects of tamsulosin for women with non-neurogenic voiding dysfunction. Women who had voiding dysfunctions for at least 3 months were included. Inclusion criteria were age > or =18 yr, International Prostate Symptom Score (IPSS) of > or =15, and maximum flow rate (Q_{max}) of > or =12 mL/sec and/or postvoid residuals (PVR) of > or =150 mL. Patients with neurogenic voiding dysfunction or anatomical bladder outlet obstruction were excluded. All patients were classified according to the Blaivas-Groutz nomogram as having no or mild obstruction (group A) or moderate or severe obstruction (group B). After 8 weeks of treatment, treatment outcomes and adverse effects were evaluated. One hundred and six patients were evaluable (70 in group A, 36 in group B). After treatments, mean IPSS, bother scores, Q_{max}, PVR, diurnal and nocturnal micturition frequencies and scored form of the Bristol Female Lower Urinary Tract Symptoms questionnaire (BFLUTS-SF) were changed significantly. Eighty-nine patients (84%) reported that the treatment was beneficial. The

proportion of patients reported that their bladder symptoms caused "moderate to many severe problems" were significantly decreased. No significant difference were observed between the groups in terms of IPSS, bother score, Q_{max}, PVR, micturition frequency, and BFLUTS-SF changes. Adverse effects related to medication were dizziness (n=3), de novo stress urinary incontinence (SUI) (n=3), aggravation of underlying SUI (n=1), fatigue (n=1). Tamsulosin was found to be effective in female patients with voiding dysfunction regardless of obstruction grade.

We observed that pre-treatment postvoid residual in group I was 121.3 ml and in group II was 127.2 ml and post-treatment postvoid residual in group I was 35.4 ml and in group II was 108.4 ml. Ahmad et al¹³ determined the efficacy of tamsulosin therapy for the treatment of lower urinary tract symptoms (LUTS) in women. All female patients aged 13 and above with LUTS were included. After taking history, physical examination and baseline investigations, specific investigations such as urine culture, urodynamics and ultrasound with postvoid residual volume were performed. Out of 94 patients, 10 did not come for follow up. Mean age of the sample was 43 years. Presenting complaints were increased frequency (n=67, 79.8%), Urgency (n=62, 73.8%), Nocturia (n=64, 54.8%), Feeling of incomplete bladder emptying (n=17, 20.2%), Poor stream (n=15, 17.9%), Hesitancy (n=5, 6.0%), and Intermittency (n=2, 2.4%). Mean PVR and IPSS decreased and Q_{max} improved significantly with p value <0.01. Efficacy was 90.5%. It was 52(96.3%) in premenopausal and 24(80.0%) in postmenopausal women. Only Two patients experienced drowsiness. *Escherichia coli* urine strains from 11 women with acute lower urinary tract infections were compared by Moreno et al¹⁴ in terms of biotype, phylogenetic

group, and virulence genes with the host's dominant intestine *E. coli* strain or strains. There were twenty-one distinct *E. coli* clones found. While fecal samples from eight women produced either one or two different non-urine clones (total, n=10), either with (n=3) or without (n=5) the concomitant urine clone, the solitary fecal clone found for three women was also the host's urine clone. Compared to the hosts' ten equivalent "faecal only" clones, the eight urine clones from the later eight women showed noticeably higher predicted pathogenicity based on virulence gene content and phylogenetic background. However, compared to the other eight urine clones, the three that were identified as the host's only fecal clone showed much lower inferred virulence and were statistically identical to the ten "faecal only" clones.

The shortcoming of the study is small sample size.

CONCLUSION

Authors found that given its obvious advantages over topical estrogen, tamsulosin ought to be the primary line of treatment for perimenopausal women exhibiting LUTS symptoms.

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