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# CLINICAL EVALUATION AND MANAGEMENT OF LOWER URINARY TRACT SYMPTOMS IN A TERTIARY CARE CENTRE

General Surgery

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## ABSTRACT

**Background:** Lower urinary tract symptoms (LUTS) are highly prevalent in adults and significantly impair quality of life. Etiologies are diverse, including benign prostatic hyperplasia (BPH), urinary tract infections (UTIs), strictures, and bladder calculi. **Aim:** To evaluate the clinical profile, diagnostic modalities, and management outcomes of LUTS in patients presenting to a tertiary care centre. **Methods:** A prospective hospital-based descriptive study was conducted over one year at MB Hospital, Udaipur. Sixty adult patients with LUTS were included. Demographic, clinical, laboratory, radiological, and endoscopic findings were recorded. Patients were managed according to diagnosis, and outcomes were assessed. **Results:** Mean age was 42.7 ± 18.1 years; 85% were male. Obstructive symptoms were reported in 70%, irritative symptoms in 58.3%. Final diagnoses were BPH (33.3%), UTI (21.7%), urethral stricture (16.7%), vesical calculus (15%), and urethral calculus (13.3%). Urine cultures were positive in 40% cases, with Escherichia coli most frequent (26.7%). TURP was the most common intervention (33.3%), followed by antibiotics (21.7%) and stone surgeries (28.3%). Clinical improvement was achieved in 85% of patients. **Conclusion:** LUTS is a multifactorial disorder, requiring structured evaluation and individualized management. TURP remains the gold standard for BPH, while medical and endoscopic therapies effectively address infections, strictures, and stones.

## KEYWORDS

Lower urinary tract symptoms, Benign prostatic hyperplasia, Urethral stricture, Cystoscopy, TURP, Urinary tract infection

## INTRODUCTION

Lower urinary tract symptoms (LUTS) affect up to 30% of adults and become increasingly prevalent with age. They are grouped into storage, voiding, and post-micturition symptoms, which often overlap and impair quality of life. In men, benign prostatic hyperplasia (BPH) is a leading cause, whereas in women, overactive bladder and pelvic floor dysfunction are frequent etiologies. Accurate evaluation is essential because symptom-based diagnosis alone is unreliable. This study was conducted to analyze the clinical presentation, diagnostic profile, and management outcomes of LUTS in a tertiary care hospital.

## MATERIALS AND METHODS

**Study Design:** Prospective, hospital-based descriptive study

**Setting:** Department of General Surgery, MB Hospital, Udaipur, Rajasthan

**Duration:** One year

**Sample Size:** 60 adult patients with LUTS

**Inclusion:** Adults >18 years with LUTS

**Exclusion:** Patients with hematuria, penile deformities, or unwilling to participate

All patients underwent detailed history, clinical examination, urinalysis, urine culture, renal function tests, ultrasonography (USG KUB), and cystoscopy where indicated. Management was tailored to diagnosis. Data were analyzed using SPSS v26; descriptive statistics applied.

## RESULTS

A total of 60 patients were included. Mean age was 42.7 ± 18.1 years (range 19–78 years); 85% were male. Obstructive symptoms were present in 70%, irritative symptoms in 58.3%.

**Key findings:**

- **Diagnoses:** BPH (33.3%), UTI (21.7%), urethral stricture (16.7%), vesical calculus (15%), urethral calculus (13.3%)
- **Urine Cultures:** Positive in 40%; E. coli (26.7%), Klebsiella spp. (8.3%), Enterococcus faecalis (5%)
- **Procedures:** TURP 33.3%, Antibiotics 21.7%, Stone procedures 28.3%, VIU 10%, Dilatation 6.7%
- **Outcomes:** Improvement in 85%, recurrence in 13.3%, no improvement in 1.7%

## DISCUSSION

Our study demonstrates that LUTS is a common clinical problem with multifactorial etiology. BPH was the leading cause, consistent with international studies. TURP was the most frequent intervention, reflecting its continued role as the gold standard. Urine culture revealed E. coli as the most common pathogen, similar to other Indian and global reports. Structured evaluation with imaging and cystoscopy enabled accurate diagnosis, and treatment tailored to etiology resulted in high rates of improvement. Recurrence was mainly observed in urethral stricture patients, in line with previous literature.

## CONCLUSION

LUTS is a prevalent disorder with varied etiologies. Comprehensive evaluation using USG, cystoscopy, and urine culture is essential. BPH remains the most common cause, best managed with TURP. Antibiotics and endoscopic procedures are effective for infection- and obstruction-related LUTS. Individualized treatment achieved high rates of improvement, underscoring the value of structured evaluation in management.

**Declarations**

**Ethical Approval:** Approved by Institutional Ethics Committee, RNT Medical College, Udaipur.

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**Conflict Of Interest:** None declared.

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