

# The Role of Internal Urethrotomy/Otis Urethrotome in Addressing Recurrent Urinary Tract Infections and Chronic Urethral Symptoms in Women: A Comprehensive Review

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## Hypothesis / aims of study

Chronic urethritis and recurrent urinary tract infections (UTIs) in women present a significant challenge. Conventional treatments like urethral dilatation and medications often fail to provide lasting relief. Internal urethrotomy, specifically with the Otis urethrotome, offers an alternative therapeutic approach. This review examines the efficacy of this method, which has shown variable outcomes in different studies.

## Study design, materials and methods

A comprehensive review of existing literature was conducted using databases such as PubMed and MEDLINE. Search terms included "chronic urethritis," "recurrent cystitis," "internal urethrotomy," and "Otis urethrotome." Relevant studies from inception to the present were selected and reviewed.

## Results and interpretation

### Otis Urethrotomy:

Promising results show 75% of women experience symptom relief after Otis urethrotomy. Farrar et al. reported 90% subjective improvement in 200 patients at 6 months, with 75% showing continued improvement beyond two years.

### Chronic Urethritis:

Smith et al. reported positive outcomes in 61% of women with chronic urethritis and 53% with recurring infection after internal urethrotomy.

### Diathermy:

Taylor et al. demonstrated that diathermy to the trigone and upper urethra yielded superior results compared to cystoscopy alone, with 45% of patients reporting no further attacks after 3 years.

### Comparison Studies:

Vermillion et al. found internal urethrotomy combined with drug therapy resulted in 78% of patients experiencing no recurrent infections after two years. In contrast, Choa et al. found no significant difference between urethral dilatation and cystoscopy, though urethrotomy yielded symptom improvement in 72% of cases.

### Medical vs. Surgical Treatment:

Netto et al. reported that medical management was more effective than surgical-medical combinations, with a higher rate of asymptomatic cases in the medical group.

### Pediatric Studies:

Kapland et al. and Vermillion et al. both observed no difference in outcomes among pediatric patients treated with antibacterial therapy plus urethral dilation or internal urethrotomy.

### Efficacy of Urethral Dilatation:

Rutherford et al. reported no clear advantage of urethral dilatation, noting that some cases developed transient stress incontinence.

## Conclusions

Despite extensive research, there is still no consensus on the efficacy of urethral dilatation. More research is needed to establish the most effective approach for managing Recurrent Urinary Tract Infections and Chronic Urethral Symptoms in women.

## References

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Study/Author	Treatment	Number of Cases	Symptoms improvement	rUTI	Conclusion
Farrar et al. (1973)	Internal/Otis urethrotomy	200		90% improvement at 6 months, 85% at 12 months and 75% at >2 years	Internal urethrotomy effective for recurrent UTIs
Eastwood et al. (1984)	Internal/Otis urethrotomy	103	80% improved or cured, 62% results maintained at 18 months	78% improvement or cure	Results independent of MSU
Schilling et al. (1989)	Internal/Otis urethrotomy	Not specified	60% significant improvement in sterile dysuria complaints	72% remained uninfected after 1 year	Improved urodynamic conditions post-surgery
Smith et al. (1973)	Internal/Otis urethrotomy	40	61% success in chronic urethritis	53% in urethritis with recurring infection	Good postoperative results
Taylor et al (1977)	Diathermy to trigone & upper urethra Vs. cystoscopy	27 (initial), 56 (follow-up)	90% found treatment worthwhile	45% had no further attacks	Diathermy improves results in female urethral syndrome
Choa et al. (1983)	Internal/Otis urethrotomy vs. cystoscopy	64	72% improved after urethrotomy, 46% after cystoscopy		Urethrotomy more effective, no significant urodynamic changes
Netto et al (1980)	Medical vs. surgical-medical treatment	71	85.8% symptom improvement with medical, 36.7% with surgical	85.4% improvement in Recurrent UTI with medical, 73.3% with surgical	Medical treatment superior to surgical-medical for recurring cystitis
Rutherford et al. (1988)	Cystoscopy vs. cystoscopy + urethral dilatation	100	30% no residual symptoms 50% improved 20% no better		No added benefit from urethral dilatation, transient stress incontinence observed
Vermillion et al. (1983)	Internal/Otis urethrotomy	106	free of symptoms	78% no recurrent infection at 2 years	Internal urethrotomy effective, especially in uncomplicated vesicoureteral reflux
Kapland et al. (1973)	Antibacterial therapy + urethral dilation/internal urethrotomy vs. medication alone	63		No difference in results among treatment categories	No significant benefit observed from urethral dilation/internal urethrotomy compared to medication alone