



Effectiveness of MET using Tamsulosin for 6 weeks Over Surgical Removal of mid and distal ureteric Stone: An Institutional Experience

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INTRODUCTION

Recent studies reported excellent results relating to medical expulsive therapy (MET) for distal ureteral calculi, in terms of stone expulsion, using an alpha receptor blocker⁽¹⁾

Surgeries like URSL become difficult for many patients attending OPD due to various socio-economic constraints and high patient load in our country.⁽²⁾

Various studies have concluded that there is a considerable chance to recovery of damaged kidney function after surgery for removal of the obstruction if baseline GFR of affected kidney is more than 10mL/min/1.73m²⁽³⁾.

OBJECTIVE

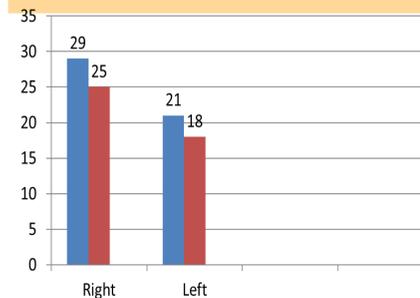
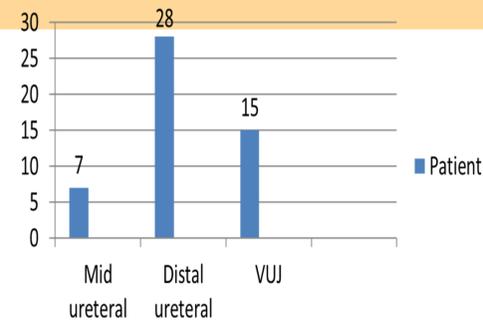
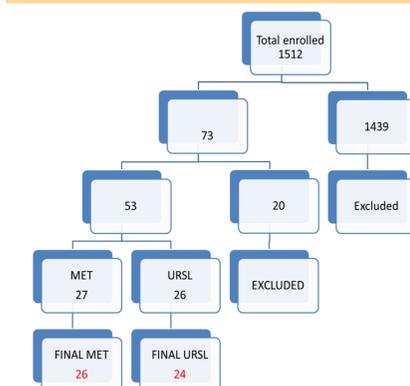
Efficacy of Tamsulosin as MET for 6weeks in mid and lower ureteral calculi expulsion over surgical management of ureteral calculus (URSL) in terms of stone expulsion rate and GFR of affected kidney

INCLUSION CRITERIA

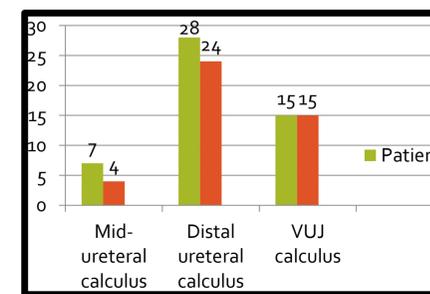
All patients above 12 years of age radiologically diagnosed with single mid and distal ureteral calculus attending the urology OPD.

EXCLUSION CRITERIA

Patients having history of endourological procedures in past for renal calculi, having multiple ureteral stones in unilateral or bilateral side, having obstructive nephropathy, Urethral strictures and patients having DJ stent in situ; Patients having pre-existing renal failure (CKD) and Patients with complete obstructive calculus(on IVU).



Calculus expulsion on the basis of side



	MET	URSL
MEAN AGE (YEARS)	37.12 ± 13	33.63 ± 8.04
MEAN SIZE OF CALCULUS(mm)	6.57 ± 1.64	7.63 ± 2.11
COMPLETE CLEARANCE OF CALCULUS	22 (84.61%)	22 (91.66%)

	MEAN PRE-MET	MEAN PRE-URSL	significance
GFR (mL/min)	33.74	32.18	0.00

	MEAN POST-MET	MEAN POST-URSL	significance
GFR (mL/min)	35.11	34.06	0.00

	MEAN PRE-TREATMENT(MET+URSL)	MEAN POST-TREATMENT(MET+URSL)	SIGNIFICANCE
GFR	32.99 mL/min	34.61 mL/min	0.00

Conclusion

GFR of affected kidney do not change significantly when Tamsulosin is used as MET for 6 weeks. Expulsion rate of mid and distal ureteral calculus using MET is 84.61%.

DISCUSSION

LITERATURE

Tamsulosin is very effective for expulsion of distal ureteral calculus(85%) upto 8mm size. Dellabella M et al,

There is an improvement in GFR (30%) when ureteral calculus is removed. Mahmud HM et al

OUR STUDY

Expulsion rate is 84.61%, however 2 stones of 1cm size also passed while using Tamsulosin as MET {Similar Results}

GFR of affected kidney improved after removal of calculus from mid and distal ureter. {Similar Results}

TAKE HOME MESSAGE

However chances of stone expulsion decreases with increase in size of calculus especially if size is more than 1 cm, by using MET, still MET using Tamsulosin can be used for 6 weeks in all patients with mid and distal ureteric stones irrespective of their size (no significant change in GFR of affected kidney within 6 weeks).

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2. A hospital too far—access to surgical facilities in India: The Lancet Global Health,2015;3;10:587-88,

3. Mahmud HM, Mahmud SM. Acute kidney injury in Ureteric Stones:Single centre short term analysis. Pak J Med Sci, 2017;33:808-12, .

Dellabella M, Milanese G, Muzzonigro G. Efficacy of tamsulosin in the medical management of juxtavesical ureteral stones. J Urol, 2003;170:2202-05