

Efficacy of Mitomycin C in Reducing Recurrence of Anterior Urethral Stricture after Internal Optical Urethrotomy

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Abstract : Introduction: Internal optical urethrotomy is the main stay treatment modality in management of urethral stricture. Being minimal invasive with less morbidity, it is commonly performed and favored procedure by urologists across the globe. Although short-term success rate of optical urethrotomy is promising but long-term efficacy of IOU is questionable with high recurrence rate in different studies. Numerous techniques had been adopted to reduce the recurrence after IOU like prolong catheterization and self-clean intermittent catheterization with varying success. Mitomycin C has anti-fibroblast and anti-collagen properties and has been used in trabeculectomy, myringotomy and after keloid scar excision in contemporary surgical practice. Present study according to the best of our knowledge is a pioneer pilot study in Pakistan to determine the efficacy of Mitomycin C in preventing recurrence of urethral stricture after internal optical urethrotomy. Objective: To determine the efficacy of Mitomycin C in reducing the recurrence of anterior urethral stricture after internal optical urethrotomy. Methods: It is a randomized control trial conducted in department of urology, Institute of Kidney Diseases Hayatabad Medical Complex Peshawar from March 2011 till December 2013. After approval of hospital ethical committee, we included maximum of 2 cm anterior urethral stricture irrespective of etiology. Total of 140 patients were equally divided into two groups by lottery method. Group A (Case) comprising of 70 patients in whom Mitomycin C 0.1% was injected sub mucosal in stricture area at 1,11,6 and 12 O clock position using straight working channel paediatric cystoscope after conventional optical urethrotomy. Group B (Control) 70 patients in whom only optical urethrotomy was performed. SCIC was not offered in both the groups. All the patients were regularly followed on a monthly basis for 3 months then three monthly for remaining 9 months. Recurrence was diagnosed by using diagnostic tools of retrograde urethrogram and flexible urethroscopy in selected cases. Data was collected on structured Proforma and was analyzed on SPSS. Result: The mean age in Group A was 33 ± 1.5 years and Group B was 35 years. External trauma was leading cause of urethral stricture in both groups 46 (65%) Group A and 50 (71.4%) Group B. In Group A. Iatrogenic urethral trauma was 2nd etiological factor in both groups. 18(25%) Group A while 15(21.4%) in Group B. At the end of 1 year, At the end of one year, recurrence of urethral stricture was recorded in 11 (15.71%) patient in Mitomycin C Group A and it was recorded in 27 (38.5 %) patients in group B. Significant difference $p=0.001$ was found in favour of group A Mitomycin group. Conclusion: Recurrence of urethral stricture is high after optical urethrotomy. Mitomycin C is found highly effective in preventing recurrence of urethral stricture after IOU.

Keywords : urethral stricture, mitomycin, internal optical urethrotomy, medical and health sciences

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