Comparison of a single dose immediate instillation of Mitomycin C 20mg versus 40mg in prevention of tumour recurrence after resection of Non muscle invasive bladder cancer

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Introduction:
The recurrence following a transurethral resection (TUR) of non-muscle invasive bladder cancer (NMIBC) remains relatively high. A single immediate postoperative instillation of Mitomycin C (MMC) reduces the rate of recurrence in the first two years but does not improve the progression of tumour or overall survival. The European Association of Urology (EAU) and American Urological Association (AUA) guidelines recommend a single immediate postoperative instillation of a chemotherapeutic agent but the dosing and concentration of Mitomycin C to be instilled is not clear. There are very limited randomized control trials (RCT) comparing the different dosing and concentration regimens of MMC in prevention of recurrence of NMIBC following a TUR.

Materials and Methods:
A randomised, prospective, two-arm, open-label, single centre, pilot study was conducted between April 2017 and April 2018 in a tertiary care centre in South India. Patients were randomised into MMC 20mg group (n = 34) or MMC 40mg group (n = 35) and analysed following a TUR for NMIBC.

Results:
 At the end of 12 months, recurrence free rates (RFR) for MMC 20mg and MMC 40mg were 57.1% and 68.6% respectively. The mean recurrence free interval (RFI) for MMC 20mg and MMC 40mg group was 11.1 months and 10.8 months respectively. The difference in RFR and RFI between the two groups were not statistically significant.

Conclusion:
A single immediate postoperative instillation of 20mg Mitomycin C is not inferior and is comparable to 40mg in preventing tumour recurrence in NMIBC.

References:

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