

Success of Trabeculectomy: May Not Always Depend on Mitomycin C

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Abstract : Introduction and aim: One of the major causes for failure of trabeculectomy is fibrosis and scarring of subconjunctival tissue around the bleb, and hence intra operative usage of anti-fibrotic agents like Mitomycin C (MMC) has become very popular. However, the long term effects of MMC like thin, avascular bleb, hypotony, bleb leaks and late onset endophthalmitis cannot be ignored, and may preclude its usage in routine trabeculectomy. In this particular study we aim to study the outcomes of trabeculectomy with and without MMC in uncomplicated glaucoma patients. Methods: Retrospective study of series of patients that underwent trabeculectomy with or without cataract surgery in glaucoma department of a tertiary eye care centre by a single surgeon for primary open angle glaucoma (POAG), angle closure glaucoma (PACG), Pseudoexfoliation glaucoma (PXF glaucoma). Patients with secondary glaucoma, juvenile and congenital glaucoma were excluded; also patients undergoing second trabeculectomy were excluded. The outcomes were studied in terms of IOP control at 1 month, 6 months, and 1 year and were analyzed separately for surgical outcomes with and without MMC. Success was considered if IOP was < 16 mmHg on applanation tonometry. Further, the necessity of medication, 5 fluorouracil (5FU) postoperative injections, needling post operatively was noted. Results: Eighty nine patient's medical records were reviewed, of which 58 patients had undergone trabeculectomy without MMC and 31 with MMC. Mean age was 62.4 (95%CI 61- 64), 34 were females and 55 males. MMC group (n=31): Preoperative mean IOP was 21.1mmHg (95% CI: 17.6 -24.6), and 22 patients had IOP > 16. Three out of 33 patients were on single medication and rests were on multiple drugs. At 1 month (n=27) mean IOP was 12.4 mmHg (CI: 10.7-14), and 31/33 had success. At 6 months (n=18) mean IOP was 13mmHg (CI: 10.3-14.6) and 16/18 had good outcome, however at 1 year only 11 patients were available for follow up and 91% (10/11) had success. Overall, 3 patients required medication and one patient required postoperative injection of 5 FU. No MMC group (n=58): Preoperative mean IOP was 21.9 mmHg (CI: 19.8-24.2), and 42 had IOP > 16 mmHg. 12 out of 58 patients were on single medication and rests were on multiple drugs. At 1 month (n=52) mean IOP was 14.6mmHg (CI: 13.2-15.9), and 45/ 58 had IOP < 16mmHg. At 6 months (n=31) mean IOP was 13.5 mmHg (CI: 11.9-15.2) and 26/31 had success, however at 1 year only 23 patients came for follow up and of these 87% (20/23) patients had success. Overall, 1 patient required needling, 5 required 5 FU injections and 5 patients required medication. The success rates at each follow up visit were not significantly different in both the groups. Conclusion: Intra-operative MMC usage may not be required in all patients undergoing trabeculectomy, and the ones without MMC also have fairly good outcomes in primary glaucoma.

Keywords : glaucoma filtration surgery, mitomycin C, outcomes of trabeculectomy, wound modulation

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