Does Topical Tranexamic Acid Reduce Post-TURP Hematuria: A Double Blind Randomized Control Trial

Introduction and Objectives: Transurethral resection of prostate (TURP) is considered to be the gold standard treatment of BPH. Bleeding after TURP is the most common complication. To reduce post-operative hematuria several different approaches have been tried. Tranexamic acid prevents bleeding by inhibiting TPA. Recent studies have proven the role of topical application of tranexamic acid in reducing the blood loss after orthopedic and dental surgeries. However, the role of topical application of tranexamic acid in decreasing hematuria after TURP through irrigation fluid has not been studied. Objectives are to evaluate the role of topical application of tranexamic acid through irrigation fluid in reducing post TURP hematuria.

Materials and Methods: A double blind randomized control trial in which 52 men who underwent TURP and met inclusion criteria were randomized to receive irrigation fluid with 500 mg tranexamic acid in one litre normal saline and placebo. Weight of resected prostate, intra-operative blood loss and blood loss on 1^{st} and 2^{nd} post-operative day were measured and the differences between the two groups were calculated.

Results: Both groups (which received tranexamic acid vs placebo) were comparable in terms of mean prostatic weight (58.84gm vs 56.15gm), mean resected prostate (31.92gm vs 32.30gm) and mean duration of resection (36.53 vs 31.46). Patients who received tranexamic acid in irrigation fluid had slightly decreased drop in mean hemoglobin levels (0.87gm on 1^{st} P.O.D and 0.31gm on 2^{nd} P.O.D) as compared to the patients who received placebo in irrigation fluid (0.98gm on 1^{st} P.O.D and 0.95gm on 2^{nd} P.O.D).

Conclusion: Topical tranexamic acid through irrigation fluid decreases blood loss after TURP.