



البحث الأول

Post-Transurethral Resection of the Prostate Inflation of Pressure-Controlled Endorectal Balloon. Impact on Postoperative Bleeding: A Preliminary Experimental Pilot Study

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Abstract

Objective: To evaluate the impact of rectal balloon (RB) inflation on post-transurethral resection of the prostate (TURP) bleeding in patients with symptomatic benign prostatic hyperplasia.

Methods: After institutional review board approval, patients who were eligible for TURP were randomized into two equal groups, depending on whether they received postoperative endorectal balloon (RB) (GII) or not (GI). The tip of three-way Foley catheter was fixed to a balloon by a blaster strip to prepare air-tight RB. Postoperatively, the RB was inflated for 15 minutes by a pressure-controlled sphygmomanometer. Perioperative data were compared between both groups, including hemoglobin (Hb) deficit 24-hour postoperatively and at time of discharge. Functional outcomes, anorectal complaints, and adverse events were assessed perioperatively and after 1 and 3 months.

Results: Fifty patients were enrolled, including 13 (26%) patients who presented with indwelling urethral catheters. Baseline data and mean resected tissue weight were comparable between both groups, including preoperative Hb ($p = 0.17$). Immediate postoperative Hb deficit was, comparable between GI and GII patients (0.58 ± 0.18 vs

0.60 ± 0.2 , $p = 0.56$) before RB inflation, respectively. However, compared to GI patients, mean Hb deficit significantly decreased in GII patients 24-hour postoperatively (0.2 ± 0.2 vs 0.7 ± 0.3 g, $p = 0.002$) and at time of discharge (0.8 ± 0.2 vs 1.3 ± 0.4 g, $p = 0.003$). GII patients needed significantly less postoperative irrigation (2.1 ± 1.6 vs 8.3 ± 1.8 L, $p < 0.001$), shorter catheterization time (2.3 ± 0.8 vs 3.8 ± 1.3 days, $p < 0.001$), and shorter hospital stay (2.6 ± 0.5 vs 4.3 ± 1.0 days, $p < 0.001$). Both groups were comparable in all functional outcomes at the most recent follow-up. Blood transfusion was needed in only one patient (4%) in GI. No patient

needed recystoscopy for hematuria or clot retention in either group, while there were no anorectal complaints reported by GII patients.

Conclusions: Post-TURP endorectal balloon inflation seems to be simple, safe, and an efficient procedure to reduce postoperative bleeding and irrigation volume. It is significantly associated with shorter catheterization time and hospital stay.