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TRANSURETHRAL RESECTION OF PROSTATE AND THE ROLE OF PHARMACOLOGICAL TREATMENT WITH DUTASTERIDE IN DECREASING SURGICAL BLOOD LOSS.

Hypothesis / aims of study

Transurethral resection of prostate (TURP) still represents the gold standard in the surgical treatment of symptomatic benign prostatic hyperplasia (BPH). The most frequent complication is represented by intra- and perioperative bleeding. Preoperative use of 5-alpha-reductase inhibitors (finasteride or dutasteride) to reduce surgical bleeding is still a topic of debate in literature. Previous studies provided favorable data on blood loss reduction by preoperative administration of finasteride or dutasteride. The aim of this study was to evaluate whether pretreatment with dutasteride for six weeks before surgery can reduce surgical blood loss.

Study design, materials and methods

A total of 142 patients with BPH who were to undergo TURP were enrolled and randomized into two groups. The dutasteride group comprising of 71 patients, was treated with dutasteride (0.5 mg/day) for 6 weeks before surgery and the control group, comprising of other 71 patients, did not receive dutasteride. Blood loss was evaluated in terms of a reduction in the serum hemoglobin level (ΔHb and ΔHCT), and was estimated by measuring the Hb and hematocrit levels before and 24 hours after surgery.

Results

None of the patients treated with dutasteride reported any side effects during the 6 weeks of treatment. No patients dropout were reported. A significantly lower mean blood loss was observed in the dutasteride group compared to the control group ($\Delta\text{Hb} = -1.29 \pm 0.81$ vs. -1.83 ± 1.25 , respectively, $p < 0.0027$; $\Delta\text{HCT} = -5.67 \pm 2.58$ vs. -6.50 ± 2.40 , respectively, $p < 0.0491$).

Interpretation of results

Aim of the study was to evaluate if pretreatment with dutasteride (0.5mg/day) for 6 weeks before TURP could reduce surgical bleeding. None of the previous authors had used dutasteride for 6 weeks before surgery. The results of the present study showed that treatment with dutasteride for 6 weeks before TURP reduces surgical bleeding. No differences were found with regard to prostatic volume, prostate resected weight, and operation time between the dutasteride and control groups. Primary endpoint of our work was to verify that pretreatment with dutasteride helps in reducing surgical blood loss and validate this statistically for a large number of subjects. In this case, we have considered 71 patients in the study group and 71 in the control group. Although, in most cases the drop in HCT/Hgb (while statistically significant) was not clinically significant, but it is important considering that we have enrolled a large number of patients (i.e., 71) in each group.

Concluding message

Our results showed that pretreatment with dutasteride for 6 weeks before TURP reduces the surgical bleeding considerably. This treatment schedule can be used routinely to decrease TURP surgical bleeding.

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