Factors Affecting Enforcement of Transfusion in BPH Patients with TURP

Introduction and Objective: Transurethral resection of prostate (TURP) is the standard surgical treatment of symptomatic BPH patients. One of the main complications of TURP is bleeding. There has been much controversy about predictions of whether the patients need blood transfusions. Thus, we studied predictive factors about whether or not they need a blood transfusion after TURP.
Materials and Methods: Between Jan 2009 and Dec 2010, 130 patients had TURP; they were reviewed retrospectively. Patients' preoperative characteristics included age, usage of laser (KTP), history of taking preoperative anticoagulant, preoperative hemoglobin (Hb) levels, prostate-specific antigen (PSA) levels, preoperative prostate size (TRUS), DM, hypertension morbidity status, and operation time. The use of lasers based on the needs of the patients' demands. Patients diagnosed with prostate cancer or had combined surgery (TURP and laser), and preoperative hemoglobin (Hb) less than 10.0 were excluded. For patients taking anticoagulants, depending on the type of medication, surgery was performed after the cessation of anticoagulants.
Results: Out of 130 patients, 27 patients (20.77%) were transfused after TURP. Out of 26 patients, 8 patients (30.77%) were transfused. In univariate analysis, age ($P < 0.001$), prostate-specific antigen (PSA) ($P < 0.001$), preoperative prostate size (TRUS) ($P < 0.001$), and operative time ($P < 0.001$) were investigated significant impact on enforcement of transfusion. On multivariate analysis, preoperative prostate size (TRUS) (OR 1.036, 95% CI (1.012-1.061), $P=0.004$) and age (OR 1.030, 95% CI (1.030-1.191), $P=0.006$) were significant independent predictors for the transfusion after TURP. Prostate-specific antigen (PSA) levels, operative time, usage of laser (KTP), and history of taking preoperative anticoagulant were not significant predictors. On ROC curves, ideal cut-off levels for the transfusion after TURP were 52g (sensitivity: 85.2%, specificity: 79.6%) in prostate size, and 70 years old (Sensitivity: 85.2%, specificity: 46.6%) in age.
Conclusions: In BPH patients with prostate size greater than 52g, older than 70 years old, there is a significantly higher rate of transfusion after TUPR. This data could be used for treatment decision and for patients' counseling information prior to surgery.