

PREDICTIVE FACTORS AFFECTING URETHRAL STRICTURE DEVELOPMENT AFTER TRANSURETHRAL RESECTION OF THE PROSTATE IN PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA

Hypothesis / aims of study

Urethral stricture after transurethral resection of the prostate (TURP) is the most common late troublesome complication (1). However, the understanding for pathogenesis or predictive factors of urethral stricture formation is still insufficient. The aim of this study is to evaluate possible factors affecting urethral stricture development after TURP in patients with benign prostatic hyperplasia (BPH).

Study design, materials and methods

We reviewed retrospectively medical records of patients who underwent TURP due to BPH for past 5 years. Patients were classified into 2 groups. Group A included patients with urethral stricture required urethral dilation more than two times in outpatient basis postoperatively. Group B included those without urethral stricture development after TURP. We analyzed all possible factors including resection time, prostate volume on TRUS, resected prostate volume, resectoscope size, preoperative catheterization duration due to acute urinary retention (AUR), postoperative catheterization duration, preoperative and postoperative pyuria, prostate needle biopsy performed preoperatively and prostate-specific antigen (PSA) level, age and co-morbid systemic diseases. We also compared patients with narrow urethral caliber preoperatively (Group I) with those who were inserted 22 Fr resectoscope without resistance (Group II) in terms of aforementioned factors.

Results

518 patients underwent TURP between 2000 and 2004. 69 of them were categorized into group I and 449 into group II. Of the group II 100 were categorized into group A and 349 into group B. There is significant difference between group A and B in comparison of resection time (58.5 ± 21.6 min vs 50.5 ± 23.2 min, $p=0.02$). However, there were no statistical differences between group A and B for the other factors. Also, there were no statistical differences between group I and II with respect to all the other factors, except urethral stricture development ($p<0.05$).

Interpretation of results

Urethral stricture development rate after TURP was 22.2% (100/449). Compared with non-stricture group, resection time was significantly longer in stricture group. However, there were no statistical differences between stricture and nonstricture groups for the other factors such as prostate volume, resectoscope size, perioperative catheterization duration, PSA and co-morbid systemic diseases. Thus, this results suggest that the shortening of resection time is the most important to decrease urethral stricture formation after TURP in patients with BPH.

Concluding message

Our data suggest that longer resection time is the most important factor to develop urethral stricture after TURP in patients with BPH. Also, we think that the innate urethral caliber could be an important possible factor of the urethral stricture development after TURP.

Reference:

1) Nielsen KK, Nordling J. Urethral stricture following transurethral prostatectomy. Urology. 1990 ;35: 18-24.

FUNDING: NONE

DISCLOSURES: NONE

CLINICAL TRIAL REGISTRATION: This clinical trial has not yet been registered in a public clinical trials registry.

HUMAN SUBJECTS: This study did not need ethical approval because retrospective study and did not follow the Declaration of Helsinki - with approval by the ethics committee - in the sense that this study do not demand ethic issues Informed consent was not obtained from the patients.