

Evaluation of Prostate Cancer Diagnosing During Surgical Treatment of Benign Prostatic Hyperplasia: Single-Centre Experience

Introduction and Objectives: Aim of our study was to determine clinical and morphological features of incidental PCa in patients with negative biopsy results and patients with no prostate biopsy prior to surgical treatment of clinical benign prostatic hyperplasia (BPH).

Materials and Methods: A series of 359 patients undergoing surgical treatment of BPH were included in our study. They were divided in 2 Groups: in Group 1, patients had negative biopsy results ($n=111(31\%)$); in Group 2 patients with no indication for biopsy were included ($n=248(69\%)$). PCa was diagnosed in 23 (5.8%) patients: 9 cases were in Group 1 (8.1%) and 14 cases were in Group 2 (5.6%). Groups were divided into subgroups, depending on detection of prostate cancer (1A, 2A) or confirming pathological diagnosis of BPH (1B and 2B).

Results: In Group 1 in prostate cancer patients, age was significantly higher than in patients with BPH ($p_1<0.05$); in Group 2 age differences wasn't statistically significant. Total PSA level was 11.2 ± 2 ; 8.4 ± 0.5 ; 3.1 ± 0.2 ; 2.3 ± 0.1 in subgroup 1A, 1B, 2A, and 2B, respectively ($p_2<0.05$), and total/free PSA ratio was 12.2 ± 1.9 ; 19.4 ± 1.4 ; 11.7 ± 0.8 ; 24.4 ± 1.4 in subgroup 1A, 1B, 2A, and 2B, respectively ($p_2<0.001$). We found significant difference in Group 2 between patients with PCa and BPH; in Group 1 such difference was not statistically significant. There were similar prostate volume and PSA density in both groups. In Group 1 rates of palpated and hypoechoic lesion were significantly higher in patients with PCa ($p_2<0.001$). In both groups patients with BPH had less severe voiding dysfunction and better health-related quality of life ($1A-5.4\pm0.2$; $1B-4.3\pm0.1$; $2A-4.9\pm0.2$; $2B-4.3\pm0.1$). In Group 1 stage T1a was seen more frequently (67%). In Group 2 the most common stage was T1b (64%). In Group 1 low- and moderate-grade PCa was diagnosed in 44.5% patients and 55.5% patients, respectively. In 21.7 % cases high-grade incidental PCa was determined.

Conclusions: Prevalence of incidental PCa in patients, undergoing surgical treatment of BPH, was 5.8%. Predictive factors of PCa were total PSA level and ratio free/total PSA. In most cases, PCa, which was found after surgery of BPH, had small size and low- or moderate-grade.