Current Differences in Stage T1a and T1b Prostate Cancer: Single-Centre Experience

Introduction and Objectives: Our aim was to compare clinical and morphological features of stage T1a and T1b prostate cancer.

Materials and Methods: There were 28 patients with prostate cancer, diagnosed after TURP or open prostatectomy were included in our study. Mean patient age was 69.7 ± 1.2 (59-84) years. Total PSA, free/total ratio, PSA density, and prostate volume were 6.8 ± 1.1 (1.8-24.4) ng/ml 12.8 ± 0.8 (6.6-26.1) %, 0.09 ± 0.01 (0.03-0.53) ng/ml^2, 80.8 ± 5.8 (43.5-160) ml, respectively. Palpable and hypoechogenic lesions were found in 10 patients (35.7%) and 11 patients (39.3%), respectively. Clinical and morphological features of prostate cancer were reviewed in 12 patients (42.9%) with stage T1a prostate cancer (Group 1), and 16 patients (57.1%) with stage T1b prostate cancer (Group 2).

Results: Our analysis with evaluation of mean values revealed, that there was no statistical difference in patients with both stages in age (T1a – 69.1 ± 1.5 (60-79); T1b – 70.1 ± 1.7 (59-84)), total PSA level (T1a – 7.5 ± 1.5 (1.8-15.5); T1b – 6.3 ± 1.5 (2.1-24.4)), free/total PSA ratio (T1a – 12.4 ± 1.5 (0.6-26.1); T1b – 13.1 ± 0.9 (8.1-18.8)), PSA density (T1a – 0.09 ± 0.02 (0.03-0.19); T1b – 0.09 ± 0.03 (0.03-0.53)), prostate volume (T1a – 87.2 ± 9.2 (51-160); T1b – 76.1 ± 7.4 (43.5-143)) and incidence of either palpable (T1a – 5 (41.7%); T1b – 5 (31.3%)) or hypoechogenic lesions (T1a – 5 (41.7%); T1b – 6 (37.5%)). Stage T1a and T1b had significant difference only in tumor grade ($p<0.001$). In stage T1a we found only low-grade (42%) and moderate-grade (58%) prostate cancer. In contrast, in stage T1b there were moderate-grade prostate cancer in 88% patients and low-grade tumors in 1 patient (6%). In 44% cases of stage T1b high-risk prostate cancer was found. Incidence of stage T1a prostate cancer was higher in patients, undergoing prostate biopsy (67% cases) ($p<0.05$), while in patients with no preoperative biopsy, stage T1b prostate cancer was found more frequently, in 68.4% cases ($p<0.01$).

Conclusions: In patients with stage T1a and T1b prostate cancer there were no significant difference in age, total PSA level and its parameters, prostate volume and incidence of palpable and hypoechogenic lesions. We also found, that in stage T1b tumor grade was lower.