Significant Risk of Prostate Cancer in Patients with Elevated PSA after Abdominoperineal Resection of the Rectum

Introduction and Objective: Screening of prostate cancer in men who have undergone abdomino-perineal resection of the rectum (APR) poses a challenge for urologists. Diagnosis and staging methods are limited, as access to the prostate via digital rectal exam (DRE) is not possible. Prostate specific antigen (PSA) can be used to screen for malignancy in this population; however, the conventional diagnostic technique with transrectal ultrasound guided biopsies cannot be employed. I report my experience with transperineal ultrasound (TPUS) guided biopsy for evaluation of elevated PSA in patients who have undergone prior APR.
Materials and Methods: Records of 52 patients who underwent multiple random TPUS guided biopsy after APR between 6/91 and 3/12 were reviewed. The median serum PSA at the time of biopsy in this population was 6.6 ng/ml with range of 2.28-237 ng/ml. Twenty-two patients had undergone APR for colorectal cancer and 30 patients for benign condition. Twelve patients had received adjuvant radiation therapy for colorectal cancer.
Results: Of the 52 cases, 41 (79%) demonstrated prostate cancer. Gleason grade ≤3+3 were found in 19, 2+4-4+3 in 14, and ≥4+4 in 8 patients. Cancer was found in 20/30 patients who underwent APR for benign reason and in 20/ 22 patients who underwent APR for rectal cancer. All 12 patients who had previous radiation therapy for rectal cancer had positive biopsy. For treatment of prostate cancer after the diagnosis, radical prostatectomy in 6, external beam radiation in 9, HDR brachytherapy in 11, hormone therapy in 5, active surveillance in 1 were noted. (unknown 9 patients).
Conclusions: Significant risk of high-grade prostate cancer was found in patients with a history of APR and elevated PSA. TPUS guided biopsy can provide accurate tissue diagnosis in theses population. Diagnosis of cancer should not be delayed due to the lack of rectal access for these patients.