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Correlation between calcification of prostate in transrectal ultrasonography with existence of prostate cancer in patients' biopsy of Imam Khomeini Hospital between 2005-2011

Abstract

Introduction: Aim of this study was to assess the association between prostate calcification in transrectalultrasound (TRUS) and sono-guided needle biopsy in prostate cancer (PCa).

Methods: A cross-sectional study was performed on patients referred to Imam Khomeini Hospital between 2005 and 2011 who underwent TRUS biopsy due to increased PSA or abnormal DRE. The serum levels of PSA, prostate volume and transition zone volume and Gleason grade were compared between patients with and without calcification.

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Results: A total of 1608 cases were included and the mean age of patients was 66.3±8.6 (range: 37-96) years. Calcification was observed in 105 cases (6.5%) and 515 (32%) hadPCa. There was no statistically significant relationship between PCa and calcification on TRUS. Among non-cancerous patients, there was a significant difference in the mean PSA level among individuals with and without calcification PSA (10.3±7.8 vs. 8.9±7.6; P=0.028). There was no difference between subjects with and without calcification in mean prostate volume and transition lobe volume among all patients and also Gleason score in patients with PCa.

Conclusion: Our study is the first in Iran that evaluate the relationship between calcification in ultrasound and PCa. The incidence of calcification in TRUS among Iranian patients was 6.5%. It is showed that there is no statistically significant association between prostate cancer and existence of prostate tissue calcification in TRUS.

Keywords: Calcification, prostate cancer

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