Prostate-specific antigen rising in Iranian men in correlation with body mass index, fasting blood sugar and blood lipid profile

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ABSTRACT

Background: Prostate-specific antigen (PSA) is a serine protease that is secreted by prostate cells and it is useful as a tumor marker for prostate cancer.

Objectives: In this study, the relationship between some of metabolic factors and serum PSA level was investigated.

Patients and Methods: In this cross-sectional study, patients with urinary symptoms or for screening of the prostate cancer (after 50 years of age or 40 years with a family history of prostate cancer), were evaluated. Collected data included metabolic syndrome factors such as cholesterol (Chol), triglycerides (TG), fasting blood sugar (FBS), and body mass index (BMI), serum PSA level, prostate volume and age.

Results: 481 patients were enrolled to this study with the average age of 60.69 ± 9.72 years and the average PSA level of 1.70 ng/ml. Data analysis showed that there was a significant relationship between serum PSA level with age ($P < 0.001$, r = 0.30) and prostate volume ($P < 0.001$, r = 0.29). There were not significant relationship between serum PSA level with TG ($P = 0.57$, r = 0.026), Chol ($P = 0.57$, r = -0.025), FBS ($P = 0.054$, r = 0.088), and BMI ($P = 0.89$, r = 0.006).

Conclusions: This study showed that, with increasing age and prostate volume, serum PSA level increased, and an increase in the levels of cholesterol, TG, FBS and BMI did not have significant effect on serum PSA level.

Keywords:
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Fasting blood sugar
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