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DO THE PROSTATIC CALCULI CAUSE HIGH LEVEL OF PROSTATE- SPECIFIC ANTIGEN?

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Introduction and objective: The benign elevation of prostate specific antigen (PSA) forms a clinician's dilemma in Middle Eastern men. We investigated whether the prostatic calculi might influence serum PSA level.

Material and Methods: Between July 2004 and March 2005, 110 patients who underwent sextant core transrectal ultrasound (TRUS) guided prostate biopsy and diagnosed as benign prostatic hyperplasia (BPH) were included. PSA serum level determination, ORE, prostate volume measurements and prostatic calculi detection by TRUS were done for all patients. All patients were biopsied either due to PSA \sim 4 ng/ml and/or abnormal findings of digital rectal examination (ORE). The patients were divided according to their PSA values into three groups, PSA \sim 20 ng/ml, PSA 10-20 ng/ml and PSA $<$ 10 ng /ml, respectively and evaluated separately.

Results: Prostatic calculi were detected in 61 of 110 patients (55.4%). There was no significant association between the presence of prostate calculi and PSA serum level ($p = 0.3$). Similarly, the association was insignificant between the prostatic calculi and prostate volume ($p = 0.6$). Abnormal findings of ORE were found in 52 out of 110 patients and these findings were insignificantly associated with the presence of

prostatic calculi ($p = 0.9$). The heterogeneous echo-pattern findings at TRUS were found in 70 patients (63.6%) and there was positive correlation between the findings of TRUS and the presence of the prostatic calculi ($p = 0.02$). The prostatic calculi were detected in 31 patients (60.1%) with PSA < 10 ng/ml and in 8 patients (42.1%) with PSA ~ 20 ng/ml. There was no correlation between TPSA serum values and total or transition volume of prostate ($r = 0.05$, $r = 0.02$).

Conclusion: Our study suggests that the presence of prostatic calculi does not influence the serum PSA level nor the prostate volume. There was no correlation between total PSA and total and transition zone volume of the prostate. However, additional prospective studies including histological findings should be carried out to confirm these results. It must be recognized that our results are related to a specific group of men and patients in another community practice setting may behave somewhat differently.