

PROSTATITIS

Urine leukocyte threshold for detection of subclinical prostatitis too high

Men with elevated serum PSA levels usually undergo prostate biopsy to rule out malignancy. A new study has shown that the most common non-cancer diagnosis—*asymptomatic prostatitis*—can be made reliably by determining leukocyte number in a sample of urine collected after prostatic massage. The currently applied cut-off value of <10 leukocytes per high power field (HPF) might, however, be too high, according to the authors.

Ali Tekin and colleagues from Istanbul, Turkey, assert that using microscopic examination of post-prostatic-massage urine to screen men with a mildly elevated PSA level and a normal digital rectal examination could reduce the number of unnecessary biopsies. “Leukocyte count in post-prostatic-massage urine may be clinically useful for screening and identification of asymptomatic prostatitis before biopsy, which may enhance the specificity of PSA,” notes Tekin.

His team prospectively evaluated 161 men with a PSA level between 4 and 10 ng/ml, no apparent symptoms of prostatitis or infection, and no abnormalities detected during digital rectal examination. All consented to collection of a post-prostatic-massage urine sample, as well as to biopsy.

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Histological review of prostate tissue samples confirmed the presence of cancer in 20% of patients, benign prostatic hyperplasia in 39%, and prostatitis in 41%. There were significant differences in leukocyte number between the three

groups, with higher counts registered for men with subclinical prostatitis. A leukocyte threshold of <5 cells per HPF was the most accurate predictor of prostatitis.

“If biopsy had been done only in subjects without prostatitis, based on a leukocyte count of <5 per HPF in post-prostatic-massage urine, unnecessary biopsies [would have been] avoided in 45% of men with benign histology, while the diagnosis of prostate cancer would have been missed in 12.5%,” states Tekin. He suggests that the currently used cut-off of <10 leukocytes per HPF is too high.

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Original article Tekin, A. et al. Post-prostatic massage examination for prediction of asymptomatic prostatitis in needle biopsies: a prospective study. *J. Urol.* **182**, 564–569 (2009).