Infectious cause of benign prostate hyperplasia

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Background: Prostate cancer and benign prostatic hyperplasia (BPH) represent the most common urologic disease among the elderly males resulting in more than 2 million visits per year. BPH affects about one-quarter of men in their 50s. The pathogenesis of BPH is not yet completely understood however, the role of chronic inflammation is emerging as an important factor in BPH development and progression. Recently, the studies have found that *T. vaginalis* may be associated with asymptomatic infections in 50-75% of infected men. In this study we investigated the possibility of asymptomatic persistence of *T. vaginalis* in the prostate gland using benign hyperplastic prostate tissue as prostate condition other than clinical prostatitis.

Materials & Methods: We investigated the occurrence of *T. vaginalis* in prostate tissue of 75 men of >50 years of age suspected and treated for BPH by transurethral resection of the prostate at the Mubarak Al-Kabir Teaching Hospital, Kuwait. The presence of *T. vaginalis* infection in the prostate tissue was determined by PCR analysis of the DNA extracted from the tissue and Immunocytochemistry of the tissue sections of the prostate tissue. In addition, P16 antigen was also detected in the tissue sections. The antibodies to *T. vaginalis* were also determined in blood.

Results: We detected *T. vaginalis* DNA in 18 of 75 (24%) and P16 antigen in 16/75 (21%) of BPH tissue samples, of which only 7 (39%) BPH tissues were positive by immunocytochemistry. Three *T. vaginalis* DNA-negative prostate tissues were also positive immunocytochemistry. *T. vaginalis*-specific antibodies with predominantly IgG4 antibodies were detected in 23 (31%) cases.

Conclusion: Our preliminary study suggests a direct evidence of *T. vaginalis* in BPH tissues with no clinical signs of prostatitis. We hypothesize that chronic *T. vaginalis* infection of prostate tissue may lead to BPH in elderly people.

Biography

Jamshaid Iqbal is a consultant at Mubarak Al-Kabir Teaching Hospital, Kuwait and he is the director at center for medical education and faculty of medicine at Kuwait University, Kuwait.

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