Future prospects in the diagnosis and management of localized prostate cancer.

Tefekli A, Tunc M.

Abstract

Prostate cancer (PCa) is the commonest visceral cancer in men worldwide. Introduction of serum PSA as a highly specific biomarker for prostatic diseases has led to a dramatic increase in the diagnosis of early stage PCa in last decades. Guidelines underline that benefits as well as risks and squeals of early diagnosis and treatment should be discussed with patients. There are several new biomarkers (Pro-PSA, PCA-3 test, and TMPRSS2-ERG) available on the market but new ones are awaited in order to improve specificity and sensitivity. Investigators have also focused on identifying and isolating the gene, or genes, responsible for PCa. Current definitive treatment options for clinically localized PCa with functional and oncological success rates up to 95% include surgery (radical prostatectomy), external-beam radiation therapy, and interstitial radiation therapy (brachytherapy). Potential complications of overdiagnosis and overtreatment have resulted in arguments about screening and introduced a new management approach called "active surveillance." Improvements in diagnostic techniques, especially multiparametric magnetic resonance imaging, significantly ameliorated the accuracy of tumor localization and local staging. These advances will further support focal therapies as emerging treatment alternatives for localized PCa. As a conclusion, revolutionary changes in the diagnosis and management of PCa are awaited in the near future.