PSA Screening in Prostate Cancer

Abstract

Introduction: Prostate cancer is one of the most common cancers in Iranian men. PSA(prostate specific antigen) screening is a controversial issue because PSA screening leads to diagnose of patients with low risk prostate cancer who not only do not benefit from treatment but also suffer from complication caused by treatment. On the other hand, without prostate cancer screening, the rate of metastatic prostate cancer will increase. This article is a narrative review article on PSA screening, reviewing clinical trial articles in the PubMed.

Methods: We searched PubMed using keywords: “PSA, Prostate Cancer and Screen” and English as well as full text articles were included. Only clinical trial studies were included. Case studies, cohort studies and review articles were excluded. 301 articles were found. Our emphasis was on four questions on benefits and harms of PSA screening and benefits and harms of prostate cancer treatment for localized prostate cancer were reviewed. Finally 15 articles were included. References from included studies were manually reviewed to identify additional studies of interest.

Results: PLCO AND CAP studies showed that PSA screening does not lead to decreased prostate cancer mortality but ERSPC study showed 21% decrease in prostate cancer mortality among people who screen for prostate cancer. The most problem in prostate cancer screening is over diagnosis. These studies revealed over diagnosis in 20.7% to 50.4% of patients who were screened with PSA. Pivot and PROTECT studies revealed radical prostatectomy for patients with localized prostate cancer detected with PSA screening, does not significantly increase the survival of prostate cancer, however; SPCG-4 study showed that radical prostatectomy significantly increased survival of localized prostate cancer.

Conclusion: Active surveillance of low-risk prostate cancer or supplemental tests such as PHI (prostate health index) and Multiparametric MRI in cases where PSA is slightly higher than normal is recommended for PSA screening.

Keywords: Prostate cancer, Screening, PSA

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