Comparison on efficacy of radical prostatectomy versus external beam radiotherapy for the treatment of localized prostate cancer.

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Since there was no consensus on treatment options of localized prostate cancer, a meta-analysis was performed to compare the efficacy of radical prostatectomy (RP) versus external beam radiotherapy (EBRT) concluding three-dimensional conformal radiotherapy (3DCRT) and intensity-modulated radiation therapy (IMRT). The search of eligible studies was performed on PubMed and Embase databases. The overall survival (OS), cancer-specific survival (CSS) and biochemical disease-free survival (BDFS) were compared by hazard ratio (HR) and odd ratios (OR). Twelve studies with 17137 patients were included. The pooled HR and 95% CI for OS, CSS and BDFS were 1.60 (1.44-1.79), 1.73 (1.34-2.24) and 0.65 (0.51-0.82), respectively. However, according to risk stratification, the HRs of CSS for low- to intermediate-risk patients were not significant. The 5-year and 10-year CSS reported significant OR and 95% CI of 1.96 (1.42-2.72) and 2.44 (1.33-4.48), except for 2-year CSS ($P = 0.42$). In conclusion, RP was generally associated with decreased risk of overall and cancer-specific mortality as well as better 5-year and 10-year OS and CSS. The EBRT was suggested to be a promising alternative option for low- to intermediate-risk patients. Large-scale prospective studies with risk stratification and adequate follow-up length were needed for further comprehensive comparison.

KEYWORDS: external beam radiotherapy; meta-analysis; prostate cancer; surgery

PMID: 29108367    PMCID: PMC5668100    DOI: 10.18632/oncotarget.20078