Biochemical recurrence following robot-assisted radical prostatectomy: analysis of 1384 patients with a median 5-year follow-up.

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Abstract

BACKGROUND: There is a paucity of data on long-term oncologic outcomes for patients undergoing robot-assisted radical prostatectomy (RARP) for prostate cancer (PCa).

OBJECTIVE: To evaluate oncologic outcomes in patients undergoing RARP at a high-volume tertiary center, with a focus on 5-yr biochemical recurrence-free survival (BCRFS).

DESIGN, SETTING, AND PARTICIPANTS: The study cohort consisted of 1384 consecutive patients with localized PCa who underwent RARP between September 2001 and May 2005 and had a median follow-up of 60.2 mo. No patient had secondary therapy until documented biochemical recurrence (BCR). BCR was defined as a serum prostate-specific antigen ≥ 0.2 ng/ml with a confirmatory value. BCRFS was estimated using the Kaplan-Meier method. Event-time distributions for the time to failure were compared using the log-rank test. Univariable and multivariable Cox proportional hazards regression models were used to determine variables predictive of BCR.

INTERVENTION: All patients underwent RARP.

MEASUREMENTS: BCRFS rates were measured.

RESULTS AND LIMITATIONS: This cohort of patients had moderately aggressive PCa: 49.0% were D'Amico intermediate or high risk on biopsy; however, 60.9% had Gleason 7-10 disease, and 25.5% had ≥ T3 disease on final pathology. There were 189 incidences of BCR (31 per 1,000 person years of follow-up) at a median follow-up of 60.2 mo (interquartile range [IQR]: 37.2-69.7). The actuarial BCRFS was 95.1%, 90.6%, 86.6%, and 81.0% at 1, 3, 5, and 7 yr, respectively. In the patients who recurred, median time to BCR was 20.4 mo; 65% of BCR incidences occurred within 3 yr and 86.2% within 5 yr. On multivariable analysis, the strongest predictors of BCR were pathologic Gleason grade 8-10 (hazard ratio [HR]: 5.37; 95% confidence interval [CI], 2.99-9.65; p < 0.0001) and pathologic stage T3b/T4 (HR: 2.71; 95% CI, 1.67-4.40; p < 0.0001).

CONCLUSIONS: In a contemporary cohort of patients with localized PCa, RARP confers effective 5-yr biochemical control.

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Comment in

A plea to young surgeons dealing with radical prostatectomy patients: invest your time and intellectual energy in optimizing your research methodology and keep your feet on the ground. [Eur Urol. 2010]

PMID: 20869162 [PubMed - indexed for MEDLINE]
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