Abstract

PURPOSE: We determined the long-term clinical significance of primary Gleason pattern in patients with Gleason score 7 prostate cancer.

MATERIALS AND METHODS: We reviewed the records of all patients who underwent bilateral pelvic lymph node dissection and radical retropubic prostatectomy for Gleason score 7 prostate cancer at our institution. All patients who underwent adjuvant hormonal or radiation therapy were excluded from analysis. Patients were monitored for biochemical failure, that is PSA progression, systemic recurrence and cancer specific survival.

RESULTS: We identified 1,688 patients who met admission criteria, of whom 1,256 (74.4%) had primary Gleason pattern 3 and 432 (25.6%) had primary Gleason pattern 4. Median followup was 6.9 years. At 10 years primary Gleason pattern 3 was associated with increased biochemical recurrence-free survival (48% vs 38%, p <0.001), lower systemic recurrence (8% vs 15%, p <0.001) and higher cancer specific survival (97% vs 93%, p = 0.013) for Gleason primary grades 3 and 4, respectively. All of these end points remained significant on multivariate analysis when controlling for preoperative PSA, seminal vesicle involvement, margin status, DNA ploidy and TNM staging. PSA doubling time was shorter in patients with primary Gleason pattern 4 (1.64 vs 1.01 years). Systemic recurrence and cancer specific survival were associated with a PSA doubling time of less than 1 year.

CONCLUSIONS: Gleason score 7 prostate cancer is a heterogeneous entity. We should continue to stratify patients according to primary Gleason pattern. Patients with Gleason score 4 + 3 prostate cancer have more aggressive disease and experience higher rates of biochemical failure, systemic recurrence and cancer specific death.

PMID: 16406993 [PubMed - indexed for MEDLINE]