

BENEFIT ON BIOCHEMICAL CONTROL OF ADJUVANT RADIATION THERAPY IN PATIENTS WITH PATHOLOGICALLY INVOLVED SEMINAL VESICLES AFTER RADICAL PROSTATECTOMY

Carlo Greco^{1,2}, Simona Castiglioni², Andrei Fodor², Ottavio De Cobelli³, Nadia Longaretti³, Bernardo Rocco³, Andrea Vavassori², and Roberto Orecchia^{2,4}

¹Division of Radiation Oncology, University of Magna Graecia, Catanzaro; ²Division of Radiation Oncology, and ³Division of Urology, European Institute of Oncology, Milan; ⁴Chair of Radiation Oncology, University of Milan, Italy

Aims and background: To determine whether there is a benefit for biochemical control with adjuvant radiation therapy to the surgical bed following radical prostatectomy in patients with seminal vesicle invasion and pathologically negative pelvic lymph nodes (pT3b-pT4 pN0).

Methods: We retrospectively reviewed the clinical records of radical prostatectomy patients treated between 1995 and 2002. A total of 66 patients with seminal vesicle invasion were identified: 45 of these patients received adjuvant radiation therapy and 21 were observed. Radiation therapy was initiated within 4 months of prostatectomy. Median dose was 66 Gy (range, 60-70 Gy). Median follow-up from the day of surgery was 40.6 months (mean, 41.5; range, 12-99). Biochemical recurrence was defined as the first value ≥ 0.2 ng/ml.

Results: At two years, the proportion of patients free from biochemical recurrence was 80% in patients who received adju-

vant radiation therapy versus 54% for those not given radiation therapy ($P = 0.036$). Actuarial biochemical recurrence at 5 years was 59% vs 41% for the radiation therapy and no radiation therapy groups, respectively. On univariate Cox regression model, the hazard of biochemical failure was also associated with a detectable (≥ 0.2 ng/ml) postsurgical prostate-specific antigen ($P = 0.02$) prior to radiation therapy. Pathological T stage (pT3b vs pT4), Gleason score, primary Gleason pattern and positive surgical margins were not significantly associated with biochemical recurrence. The hazard of biochemical failure was around 85% lower in the radiation therapy group than in the observation group ($P = 0.002$).

Conclusions: Data from the present series suggest that adjuvant radiation therapy for patients with seminal vesicle invasion and undetectable (≤ 0.2 ng/ml) postoperative prostate-specific antigen significantly reduces the likelihood of biochemical failure.

Key words: biochemical failure, conformal radiotherapy, prostatectomy, seminal vesicle invasion.