

Long term local control and survival in breast cancer patients stage I and II after breast conserving treatment

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Purpose: 1. To present 9 years survival and local control rates in our patients
2. To establish the eventual impact of our management strategies and some patients' characteristics on the treatment results

Patients and methods: From January 1980 till December 1991 579 breast cancer patients were treated with conservation surgery and radiotherapy at the Institute of Oncology in Ljubljana. There were 274 patients with a T1 tumor and 305 with a T2 tumor. Quadrantectomy was performed in 332 patients and tumorectomy in 247 patients, an axillary dissection in 508 patients. Histologically, 309 patients had negative axillary dissection while 199 had histologically confirmed axillary metastases. Postoperatively all patients were irradiated with 50 Gy to the whole breast in 5 weeks, followed by a boost of 6-20 Gy in 504 cases. Radiotherapy to regional nodes (axilla and supraclavicular), TD 50 Gy was given to 58 patients who had no axillary dissection performed. Adjuvant chemotherapy was given to 197 patients and hormonal therapy to 91 patients.

Results: With a minimum follow-up of 5 years and a median follow-up of 9.2 years, the 9 year actuarial local recurrence free rate in our patients is 93.8% and the 9 year actuarial survival rate is 80%.

Statistically significant prognostic factors for survival were as follows: axillary nodes status ($p < 0.001$), tumor size ($p < 0.001$), hormonal receptor status ($p < 0.001$), tumor grade ($p < 0.005$), local recurrence ($p < 0.005$). There was no impact of age, the extent of surgery, RT dose, adjuvant chemotherapy or hormonal therapy on survival.

Statistically significant prognostic factors for local control were as follows: age ($p < 0.001$), extensive intraductal component ($p < 0.001$), RT dose ($p < 0.005$), the extent of surgery ($p < 0.05$). RT dose higher than 50 Gy (boost) was significant only in the group of patients treated by tumorectomy, while the extent of surgery was important only in the group of patients who received TD 50 Gy (no boost).

There were 3 axillary failures noted, 1/58 irradiated without axillary dissection, 1/13 patients without axillary dissection and no radiotherapy and 1/508 dissected but not irradiated axilla (199 patients in this group had histologically confirmed metastases).

Conclusion: Treatment by means of conservation surgery and radiotherapy is associated with low breast cancer recurrence. As the extent of surgery and radiotherapy dose are inversely related in our patients, we conclude that tumorectomy with a boost to the tumor bed is probably cosmetically preferable to quadrantectomy. Omission of axillary irradiation after axillary dissection even in patients with axillary metastases appears appropriate.

Key words: breast neoplasms; conservation surgery; radiotherapy; survival rate; local control; prognostic factors
