Partial Breast Brachytherapy After Lumpectomy As Salvage Treatment Of Local Recurrences After Conservative Treatment Of Breast Cancer: Eighteen-year Results Of A Non-randomized Comparison With Mastectomy


Purpose/Objective(s): To report the long term results obtained in a prospective group of patients (pts) treated for local recurrence after conservative treatment of breast cancer treated by a second conservative surgery or by total mastectomy.

Materials/Methods: Between 12/1990 and 10/2004, 85 patients with <3cm, low-risk local recurrence after conservative treatment for breast cancer were offered total mastectomy. 48 of them refused it and were treated by a second lumpectomy followed by HDR brachytherapy implant to the tumor bed plus a 3 cm margin. 30 Gy in 12 fractions in 5 days were given. Patients treated by mastectomy had no further radiotherapy treatment. Postmenopausal patients with negative receptors had no systemic treatment. The rest of the patients had chemo or hormonal treatment. No patient was lost for follow-up.

Results: All patients completed treatment. During the 17-year, 1-year minimum follow-up, in the 2nd conservative group there were 8 pts who had regional (2 pts) or distant metastases (6 pts) as their first site of failure. 3 of them experienced a differed local recurrence and 1 died from the disease. In the total mastectomy group, there were 2 local recurrences, 1 regional recurrence and 5 distant metastases as first site of failure. One patient died from the disease. Actuarial results at 17-year for 2nd conservative and total mastectomy were respectively: local control 84.2% - 71.7%; disease free survival 65.4%-63.8%; and survival 90.7% and 88.2%. Cosmetic results were satisfactory in 89.4 % treated conservatively. No patient experienced arm edema or grade 3-4 early or late complications. Between the 14 pts that were followed-up for at least 10-years, 13 of them were with their breast still in place.

Conclusions: Second conservative treatment by HDR brachytherapy was a safe and effective method of treatment for small-size, low-risk, local recurrence after local excision in conservatively treated patients. Partial breast irradiation with wide margins proved to be enough treatment, without significant side-effects in previously intensively irradiated patients. Lumpectomy and partial breast brachytherapy can be considered the treatment of choice in selected patients with low-risk recurrent breast tumors.