821 PUBLICATION

Five-year outcome of interstitial brachytherapy in the management of breast cancer patients treated with breast conserving surgery

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Purpose: We reviewed our institution's experience with interstitial implant boosts to determine their five-year impact on local control and cosmetic results.

Method: Between 1989–98, 100 women were managed with breast-conserving surgery (BCS). Radiation consisted of 46–50 Gy/23–28 f external beam irradiation to the whole breast followed by median 15 Gy (10–25.3) inerstitial implant boost to the tumor bed using LDR 192Ir wire and Paris dosimetry system. All of the patients tumor bed were localized using position of sugical scar, determination of tumor bed scar by ultrasonography and radiological control of surgical clips (29% of all pts.).

Results: Tumor stage were 55% T1, 43% T2, 1% T3, 1% T4 and lymph node stage were 62% N0, 34% N1, 4% N2. With mean follow-up 35±32 months, 6% of patients have recurred locally. Local disease free survival (LDFS) were 90% and 60% in patients with surgical margins were negative and positive respectively (p = 0.03). Overall Survival were 90%, DFS were 78% and LDFS were 90% for all group. Cosmetic outcome 86% were excellent and good.

Conclusions: Patients with breast cancer undergoing BCS can be effectively managed with LDR interstitial boost. Local control was seen as a result of negative surgical margins and marked tumor bed using clips.

822 PUBLICATION

Bilateral breast carcinoma: Conservative surgery and RT are feasible?

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Purpose: This study evaluate the results of surgery and RT in bilateral breast cancer.

Materials and Methods: On 950 breast cancer patients (pts) treated whith quadrantectomy + RT (QUART), 44 pts presented bilateral tumor, synchronous in 5 cases. 19 pts were treated with radical surgery and controlateral QUART, 23/25 pts with bilateral QUART (RTE 50 Gy/ICRU + 12 Gy boost), 2 pts with Brachytherapy alone (192 Ir, 60 Gy). CT-based dose calculations were performed. The late reactions, cosmetic results, local failure and the impact of patient- and treatment-related factors (age, total and inhomogeneity dose, technique of boost, surgical complications, acute skin reactions, chemotherapy, IMN irradiation) were studied.

Results: 1/25 pts had local failure at the 22nd month after 1st treatment. Local control was achieved in all controlateral tumors. No acute or late reactions for overlapping, cardiac complications or radiation pneumonitis developed. For central or inner tumors ipsilateral internal mammary node (IMN) was treated in only 2/10 pts. In 3/6 pts the irradiation of the controlateral IMN for the first carcinoma required BT (in 2 cases alone and in 1 as a boost). The cosmetic results were evaluated at 12 months after RT in all pts, 24 months in 17 pts and >36 months in 10 pts. Only in 3 pts the cosmetic result was poor: this outcome is related to the first treatment. There is significant correlation between IMN irradiation and results, independently from the techniques used (Pearson correlation coefficient P < 0.03). No relationship was observed between the cosmetic results and other patient- and treatment-related variables.

Conclusion: This study showed that irradiation of bilateral breast cancer is feasible with good results if the dose distribution is performed using CT-treatment planning system. The IMN irradiation determined poor cosmetic results in this group of pts.

823 PUBLICATION

Serum cholesterol, HDL cholesterol and triglycerides during adjuvant CMF therapy in premenopausal breast cancer patients

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Adjuvant chemotherapy with cyclophosphamide, methotrexate and 5-fluorouracil (CMF) has been suggested to change the concentrations of serum lipids in premenopausal breast cancer patients at least when ovarian failure is induced. We measured serum concentrations of cholesterol, HDL cholesterol and triglycerides serially in 14 premenopausal breast cancer patients receiving CMF adjuvant chemotherapy (i.v.) and optional radiotherapy (9 patients). The mean age of the patients was 43.1 years and mean weight 62.5 kilograms when entering the study. The follow-up time was from pretreatment up to 10 months (at 3 and 5–8 weeks and 4, 6–8 and 10 months).

Amenorrhea was induced in 12 women (86%). The mean weight gain during the study was 3.2 kilograms. Of the lipids, only triglycerides increased significantly at 5–8 weeks (p = 0.0212), 4 months (p = 0.0142) and 6–8 months (p = 0.0155) when compared to pretreatment values. This increase was not seen at 10 months. The mean triglycerides value at pretreatment was 0.78 ± 0.27 mmol/l and the maximum values observed at 5–8 weeks were 0.96 ± 0.38 mmol/l. In women who became amenorrheic, the increase of triglycerides was observed only at 4 months (p = 0.0424). Cholesterol and HDL cholesterol maintained their pretreatment concentrations (5.09 ± 0.88 mmol/l and 1.55 ± 0.27 mmol/l, respectively) in both groups throughout the study.

This study suggests that CMF adjuvant treatment causes minor increases in serum triglycerides. The clinical relevance of the increases needs to be studied further.

824 PUBLICATION

Analysis of factors influencing axillary lymph node involvement in breast cancer

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Purpose: Indications for irradiation of peripheral lymph nodes including axillary nodal group in breast cancer patients are still controversial. In this study, we analysed possible prognosticators influencing axillary nodal involvement in breast cancer.

Materials & Methods: Data from 234 breast cancer patients who were treated at Uludag University M. A. Radiotherapy Centre since November 1995 were analysed retrospectively in terms possible prognostic factors such as age, menopausal status, family history, receptor status, tumour size and volume, histological and nuclear grade, presence of lymphatic and vascular invasion, perineural invasion, lymphatic and desmoplastic reactions, presence of necrosis, and microcalcification, multicentricity, extensive intraductal component, cutaneous and subcutaneous involvement, pectoral muscle invasion. Axillary nodal involvement was analysed in four groups; 0, 1–3 nodes, 4–9 nodes and >10 nodes. Spearman and Pearson, Kruskal-Wallis and t-test were used as statistical methods. Multiple regression analysis was also performed in correlated parameters.

Results: In univariate analyses, increasing tumour size, presence cutaneous and subcutaneous invasion, presence of nipple invasion multicentricity, presence of pectoral muscle and perineural invasion were statistically significant factors affecting axillary nodal involvement. In multiple regression analyses, presence of extensive intraductal component, estrogen receptor status, tumour size and volume were correlated significantly with axillary nodal involvement.

Conclusion: Major prognosticators for axillary nodal involvement in breast cancer patients are tumour size and volume, the presence or absence of extensive intraductal component and estrogen receptor status.

825 PUBLICATION

Myomammary flap of pectoralis major muscle for breast reconstruction: New technique

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Purpose: simple mastectomy and modified radical mastectomy still the preferred surgical technique for management of breast cancer, as it is