

Friday, February 27, 1998

9.00–18.00

Adjuvant Radiotherapy**P60 Adjuvant radiotherapy has no benefit after primary breast cancer treatment in selected postmenopausal patients**

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The need of adjuvant radiotherapy after breast conserving surgery for local-ized breast cancer remains uncertain, especially in selected postmenopausal patients adjuvant irradiation may be spared.

We analysed 379 consecutive postmenopausal patients treated at our surgical department from 1983 to 1994. Surgical procedure was quadrantectomy and axillary dissection of level I + II in all patients. Only postmenopausal, lymph node negative patients with tumor diameter below three centimeter were included in this analysis. Half of the patients had adjuvant radiotherapy, the other part was not irradiated postoperatively. The influence of adjuvant radiotherapy on local recurrence free and overall survival was studied together with other prognostic factors both in univariate and multivariate manner.

Analysis of the tumor characteristics revealed 82% of the patients having a tumor below two centimeter, 81% had a well or moderate differentiated tumor and 78% of the tumors were hormone receptor positive. After a median follow-up of five years adjuvant radiotherapy was unable to significantly reduce local recurrence free survival nor overall survival in this selected postmenopausal patients: 96% of the patients without adjuvant radiotherapy and 98% of the patients with radiotherapy were free of local recurrence ($p = n.s.$); overall survival was 89% without radiotherapy versus 90% in the irradiated group ($p = n.s.$). Multivariate analysis revealed none of the prognostic factors to be significant for local recurrence free survival; overall survival was found to be independently influenced by the receptor status ($p = 0.02$).

In subgroup analysis of patients with hormone receptor positive tumors (250 pts) and those with adjuvant Tamoxifen therapy (181 pts) the local recurrence rate was under 3% with or without adjuvant irradiation. In a prospective randomized trial of hormone receptor positive postmenopausal patients with different adjuvant hormone therapy after breast conservation we observed a local recurrence rate of 2% with or without radiotherapy.

Therefore we conclude that postmenopausal patients with positive tumor characteristics (Tu <3 cm, node negative, grading I or II, hormone receptor positive and adjuvant Tamoxifen therapy) have no benefit from adjuvant irradiation. A prospective randomized trial evaluating adjuvant radiotherapy in this patient group is currently in progress and we urgently await first results within the next years.

P61 Sector resection with or without postoperative radiotherapy for stage I breast cancer. Long term results and definition of a subgroup not requiring radiotherapy

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After sector resection and axillary dissection 389 patients with tumour size ≤ 20 mm on the preoperative mammogram and with no histopathological evidence of metastases to the axillary lymph nodes were randomly assigned to receive either postoperative radiotherapy to 54 Gy, $n = 184$ (XRT group) or to surgery alone, $n = 197$ (non-XRT group).

With a median follow up of 110 months the estimated incidence of local recurrence at 10 years was 8.5% (95% CI 3.9%–12.9%) in the XRT group and 24% (95% CI 17.6%–30.4%) in the non-XRT group ($p = 0.0001$). However, there was no difference in regional and distant recurrence ($p = 0.29$) or in over all survival ($p = 0.99$).

Among patients >55 years of age without comedo or lobular carcinoma (46% of the study group) there was a non significant difference in the incidence of local recurrence at 10 years of 6.1% (95% CI 0.1%–12.1%) in the XRT group compared to 11.0% (95% CI 4.0%–18.0%) in the non-XRT group ($p = 0.16$).

Conclusion: Routine postoperative radiotherapy after sector resection and axillary dissection for mammographically visible stage I tumours reduces the incidence of local recurrence at 10 years with $\approx 15\%$ but has no impact on regional or distant recurrence or on over all survival. In patients >55 years of

age without comedo or lobular carcinomas the incidence of local recurrence at 10 years is low even without the addition of postoperative radiotherapy.

P62 Influence of radiotherapy on the dose intensity of CMF as adjuvant treatment

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Introduction: Radiotherapy is part of conservative treatment of the breast. Also, it has demonstrated to be important after mastectomy in preventing local recurrence and improving overall survival. Chemotherapy can be administered during radiotherapy depending on the type of drug combination treatment. In addition, the dose intensity of chemotherapy can influence in overall survival.

Aim: To evaluate the influence of radiotherapy on the dose intensity of CMF as adjuvant treatment.

Patients and Method: Between July 1989 and December 1996 260 patients with breast cancer treated prospectively with adjuvant chemotherapy according to a CMF combination. 74 patients received CMF after mastectomy without radiotherapy, 151 after conservative treatment with radiotherapy, and 35 after mastectomy plus radiotherapy. CMF (600/40/600) was administered every three weeks for 8 cycles. Chemotherapy was administered when Leukocytes were ≥ 3000 or neutrophils ≥ 1500 , and platelet ≥ 75.000 . No dose reduction was foreseen. When hematological toxicity was documented chemotherapy administration was delayed for one week.

Radiotherapy was administered, concomitantly with chemotherapy, in sessions of 2 Gy (50 Gy total dose) and a boost of 15 to 25 Gy in patients with conservative treatment. Patients with mastectomy received 50 Gy.

Results: Hematological delays were significantly higher in patients that received radiotherapy (0.7 vs. 1.3, $p < 0.01$), but this fact didn't prolong the duration of the chemotherapy (24.4 weeks vs. 25.9). No differences were observed in the other types of delays. Dose intensity of chemotherapy was less but not significant in patients subjected to radiotherapy (0.95 vs. 92). However we have observed a greater percent of patients who received less than 0.85 of the dose (10% vs. 17%).

It was found that when radiotherapy was administered during chemotherapy there were more possibilities of hematological delay (0.08 vs. 0.31, $p < 0.001$). However after radiotherapy the risk of hematological toxicity was reduced.

Conclusions: The concomitant administration of radiotherapy produces an increasing the risk of delay for hematological toxicity. However, this fact doesn't influence the dose intensity of chemotherapy.

P63 Neutron therapy in treating patients with breast cancer

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The Aim: is to estimate the efficiency of radiotherapy using fast neutrons with energy of 6 MeV in a complex treatment of the local breast cancer (BC), relapses and metastases of the tumor.

Material and Methods: There have been treated 44 patients aged 35–77: 14 females with a primary BC (T3–4 N1–2 M0). Their treatment included the course of neoadjuvant chemotherapy according to the CMF scheme, the course of preoperative neutron therapy by 3 fractions using 2.4 Gy 8–12 days before the course with performing a radical mastectomy immediately after ending radiation. In the postoperative period there was realized a standard remote gamma-therapy to the zones of the regional metastatic spreading (the total focal dose (TFD) is 50 Gy and 4–5 courses of chemotherapy). Chemotherapy according to the scheme CMF or CAF, neutron therapy or combined neutron-photon therapy by a radical program of TFD- 50–60 Gy was given to 30 patients with relapses and metastases.

Results: The course of preoperative neutron therapy causes morphological changes in the tumor without worsening the postoperative period condition. In observation periods from 12 to 36 months there was not noted the relapses of the tumor and damage of normal tissues. A complete regression of relapses and metastases of breast cancer after conducting neutron and combined radiotherapy was observed in 93% and 62% of cases, respectively. Radial ulcers after neutron therapy course were found in (18%) from 28 patients. For preventing the development of radial skin reactions there was used a copper-vapor laser.

Conclusion: The use of neutron therapy in treating patients has an expressed antitumoral effect. In treating relapses and metastases of the tumor using neutron or combined radiotherapy should be conducted together with laser therapy for preventing complications.