

visualization rates and surgical retrieval rates that are similar to the yield of the SN procedure in patients with palpable breast cancers.

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POSTER

Managing patients with invasive lobular carcinoma: Does the type of surgery matter? Do we need to extend the follow up period?

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Background: Breast conservation surgery (BCS) in patients with invasive lobular carcinoma (ILC) is still controversial due to its different clinicopathological features. Most units report local recurrence (LR) and discharge patients after a relatively short follow up.

Aim of the study: To study the clinical outcome of patients treated for ILC after long term follow up.

Patients and Methods: 348 patients treated between 1989 and 1996 were reviewed. 113 patients were excluded (incomplete data in 91 and primary hormonal therapy in 22 patients). 235 patients were statistically analyzed.

Results: 79 patients (33.6%) had BCS (group I), which was followed by re-excision due to positive margins in 23 patients (29%), and 156 patients (66.3%) had mastectomy (group II). Compared to group II, tumours in group I were smaller (mean size 17 v 37 mm, $p=0.001$), multifocal (20 v 14 tumours, $p=0.003$) and more positive margins (23 v 24, $p=0.0009$). 33 patients (21%) in group II and all patients in group I had radiotherapy ($p=0.0001$).

48 patients (20%) developed LR after a median follow up of 133 months (Range 24–196), (27 in group I and 21 in group II, $p=0.0005$). Cox regression analysis of LR showed that the type of surgery, margins, adjuvant radiotherapy and chemotherapy affected LR ($P=0.0005$, 0.02, 0.04 and 0.05 respectively).

The overall survival was 78.2%. Cox regression analysis showed that only the patients age affected survival ($P=0.003$).

Conclusion: Local recurrence can be a late event in patients treated for ILC and extended follow up may be considered. Mastectomy offers a better local control.

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POSTER

High dose chemotherapy with marrow or stem cell transplantation versus conventional chemotherapy for breast cancer: an overview of randomized trials

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Background: A number of trials have compared high dose chemotherapy followed by bone marrow or stem cell transplantation (HDC) with conventional chemotherapy (CC) for the treatment of metastatic, as well as, high risk early breast cancer but results have been largely inconclusive. We performed a meta-analysis to estimate the risks and benefits of HDC. **Methods:** We searched the MEDLINE database, the online proceedings of the American Society of Clinical Oncology and the San Antonio Breast Cancer Symposium to identify trials randomizing patients with breast cancer, to either HDC or CC. Data on breast cancer related outcomes, treatment adverse effects, and overall survival were abstracted from published reports. Pooled risk ratios (RR), or odds ratios (OR) when appropriate, and their confidence intervals were calculated. Values lower than one indicated a benefit from HDC. Continuity correction, proportional to the relative size of the opposite of the study, was used for studies with zero events in one arm. Results are presented in accordance with the QUOROM guidelines.

Results: A total of 20 studies were considered eligible: 14 evaluated HDC for high risk early breast cancer (5,598 women; HDC: 2,798, CC: 2,800) and 6 for metastatic disease (851 women; HDC: 438, CC: 413). In the adjuvant setting, HDC did not improve overall survival (RR, 1.01; 95% CI, 0.93 to 1.09) despite a small but statistically significant improvement in disease free survival (DFS; RR, 0.90; 95% CI, 0.83 to 0.98). Interestingly, the increase in DFS was limited to women with ≥ 10 involved axillary lymph nodes (RR, 0.89; 95% CI, 0.82 to 0.98), while women with 4–9 involved nodes did not derive any benefit (RR, 0.92; 95% CI, 0.81 to 1.06). HDC was associated with a clear increase in severe neutropenia (OR, 1.68; 95% CI, 1.26 to 2.26), febrile neutropenia (OR, 5.16; 95% CI, 1.30 to 20.45), deaths due to sepsis (OR, 6.83; 95% CI, 1.95 to 23.98), and all cause treatment mortality (OR, 4.42; 95% CI, 2.06 to 9.52). There was a trend towards an increased incidence of leukemia in patients allocated to HDC (OR, 1.91; 95% CI, 0.88 to 4.16). For metastatic disease, HDC was associated with a small, marginally non-statistically significant, improvement in overall

survival (RR, 0.90; 95% CI, 0.80 to 1.01). The rates of complete response (RR, 1.50; 95% CI, 0.87 to 2.58), partial response (RR, 1.09; 95% CI, 0.93 to 1.29) and stable disease (RR, 0.82; 95% CI, 0.42 to 1.62) did not differ between treatment arms. Treatment related deaths were increased among patients with metastatic breast cancer randomized to the HDC group (OR, 3.62; 95% CI, 1.14 to 11.43).

Conclusion: Although there is some evidence supporting a limited beneficial effect of HDC for high risk early and metastatic breast cancer, such treatment is associated with an unacceptable increase in the incidence of life-threatening and fatal adverse events. An individual patient data meta-analysis could better define if certain patient subgroups derive enough benefit to justify the increased risk of HDC. For the time being, HDC cannot be advocated outside the clinical trial setting.

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POSTER

Comparison of breast irradiation in prone and supine position in early stage breast cancer patients

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Introduction: External beam radiotherapy for breast cancer patients is necessary after breast conserving therapy. Volume of breast tissue which needs to be irradiated is close to critical structures such as lung, heart; therefore an alternative prone position could be used to improve dose homogeneity during radiotherapy. The purpose of this study was to compare dose distribution within target and normal tissue volumes between two radiotherapy plans in prone and supine position in women with large and small breasts.

Material and Methods: 20 early breast cancer patients in clinical stage T1–2N0 were treated with breast conserving therapy and were dedicated for further radiotherapy. Planning CT was performed in a prone and supine position and two treatment plans for each patient were developed using conventional tangents technique. Dose volume histograms were produced and plans were compared with regard to dose volumes parameters.

Results: There was no difference between mean doses to the target volume (50.8 ± 0.57 Gy for supine position and 50.6 ± 0.76 Gy for prone position), but higher minimum dose in this volume was achieved in the prone position (35.5 ± 2.7 vs. 40.3 ± 2.4 Gy). The percentage of ipsilateral lung receiving 10 Gy was $16 \pm 3.1\%$ for supine position and only $9 \pm 7.87\%$ for prone position, 20 Gy ($13 \pm 2.8\%$ and $4 \pm 3.7\%$ respectively). Furthermore, the maximum and mean dose to the ipsilateral lung and heart was lower in prone position compare to supine position.

Conclusion: Irradiation of patients in prone positions compared to supine positions improved dose distribution within target volume. Using plans generated in prone position we were able to reduce the dose to the organ at risk especially ipsilateral lung and heart.

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POSTER

Usefulness of imprint cytology and frozen section examination of the sentinel lymph node in patients with breast cancer

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Background: The accuracy of sentinel lymph node biopsy in patients with breast cancer should be both accurate and rapid, but unfortunately the false negative rate ranges between 10% and 20%. The aim of this study was to evaluate the usefulness of intraoperative imprint cytology and frozen section examination together in improving the sensitivity of sentinel lymph node procedure in patients undergoing curative surgery for primary breast cancer.

Patients and Methods: A series of 86 consecutive women (median age 53 years, range 34–70) with breast cancer confirmed by fine-needle aspiration biopsy, core biopsy or open biopsy and clinically negative nodes (T1N0) underwent sentinel lymph node procedure using a combined radioisotope and blue dye method. One or more sentinel lymph node were identified in all patients. A total of 126 axillary node were processed by both intraoperative imprint cytology and frozen section examination, and the results were compared against the final pathology.

Results: Permanent hematoxylin-eosin specimens revealed 44 (34.9%) metastasized axillary nodes, and confirmed breast cancer in all patients.