

Methods: All breast cancer wide local excisions were eligible for inclusion with data prospectively collected over a six month period from June 2010 to January 2011.

Results: 75 patients underwent wide local excision. 8 specimens did not undergo cabinet x-ray and were therefore excluded from the study. Of the 67 that underwent cabinet x-ray, 52 were needle-localised and 15 were palpable. 20/67 (30%) patients underwent a cavity shave following cabinet x-ray; 6/20 (30%) contained malignancy, of which 4/6 (67%) required a second operation for re-excision. Therefore, only 2/67 (3%) patients avoided further surgery as a result of cabinet x-ray imaging. The remaining 14/20 patients (70%) underwent an unnecessary further shave, as no malignancy was found, and clear margins had already been achieved in all but one case from which tumour cells were identified from a separate margin.

47/67 (70%) patients did not undergo a further shave following cabinet x-ray; 17/47 (36%) subsequently required re-excision of margins.

Conclusions: This study provides no evidence that specimen microradiography with cabinet x-ray is beneficial in reducing re-excision rate following wide local excision of breast cancer. Furthermore, it may encourage excessive removal of healthy breast tissue.

References

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POSTER

Assessment of Sensory Disturbances of Upper Extremity After Nerve-sparing Axillary Lymph Node Dissection

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Background: Axillary lymph node dissection (ALND) is classically associated with a high rate of morbidity – lymphoedema (6–43%), intercostobrachial neuralgia (58–81%), arm mobility restriction (17–33%), stiffness/weakness of upper extremity (17–33%).

Intercostobrachial nerve syndrome (post-axillary dissection pain syndrome) is the most frequent postoperative complication of ALND due to surgical injury of intercostobrachial (Hyrtl) nerve (ICBN) during ALND.

The ICBN arises as the lateral cutaneous branch of the ventral primary ramus of T₂ and supplies sensory fibers to the medial aspect of the upper arm, axillary skin, and upper lateral breast.

Intercostobrachial neuralgia represents neuropathic pain typically accompanied by remarkable sensory abnormalities in the distribution of the ICBN.

Material and Methods: We conducted a prospective study to evaluate the frequency, character and location of sensory disturbances of upper extremity in two consecutive groups of women who underwent level-2 ALND for operable breast cancer at National Center of Oncology in the period of 2005–2010 years.

In group I (nerve-preserved or experimental group – 110 patients) besides of motor nerves (long thoracic and thoracodorsal nerves) the ICBN was preserved (nerve-sparing or functional ALND). In group II (control or nerve-sacrificed group – 110 patients) the ICBN was transected (conventional ALND).

The ICBN was preserved in the absence of grossly involved nodes. Tactile sensitivity was assessed after 3 months from the surgery by special questionnaire (subjective examination) and using standard neurological methods (objective examination). The mean age of the patients was 47.8±12. Patients' demographic characteristics were alike. The two groups (preserved and sacrificed) were well balanced for TNM, type of surgery, number of nodes dissected and positive, postoperative adjuvant treatment. Statistical differences between the groups were calculated using Pearson chi-square test. A P value of <0.05 was considered statistically significant.

Results: The analyses of results showed, that prevalence rate of sensory disturbances of upper extremity was 12.7% (14/110) in the experimental group, which was significantly different from that of the control group (88.2%, 97/110, p < 0.01).

In the nerve-preserved group sensory changes had character of hypesthesia (diminished sensitivity, 5/14) or paresthesia (numbness, 9/14). Meantime, in the control group, sensory changes had more severe character in the form of dysesthesia (painful paresthesia, 37/97) or anesthesia (loss of all types of sensitivity, 60/97), and in 5 patients the phenomenon of allodynia (painful response to innocuous stimulus) was observed.

A larger area of sensory deficit was measured in women with sacrificed nerves (group II) compared to preserved (group I).

Conclusion: Our study demonstrates, the preservation of the ICBN during ALND produces minimal postoperative alterations in sensitivity significantly improving quality of life of operated patients.

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POSTER

Sentinel Lymph Node Navigation Surgery With Indocyanine Green Fluorescence in Early Breast Cancer

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Background: Sentinel lymph node (SLN) biopsy is a minimally invasive and effective method for assessing axillary lymph node status in breast cancer. Currently dye techniques, radioisotope techniques or combined techniques are used for SLN detection and recently, near infrared fluorescence imaging has been applied clinically in a breast cancer patient to identify SLN. The concept of this technique is to detect the subcutaneous lymphatic flow from the areola toward the axilla in real time and identify SLN as fluorescence spot. Our aim in this study is evaluate the feasibility of SLNB by using the ICG technique and the effect of Body Mass Index (BMI) on the number of SLN identified.

Methods: The study involved ninety eight patients with clinically node negative early breast cancer who were assigned to SLNB, bilateral SLNB were performed on seven of them. A combination of indocyanine green as a fluorescence emitting source and patent blue dyes were injected in the periareolar area and a charge coupled device camera equipped with a cut filter was used, first to trace the subcutaneous lymphatic channels then to identify the fluorescence image of SLN after meticulous dissection. Both of them were seen in real time on a TV monitor. According to their fluorescence imaging and the blue color, the LNs were classified as SLN which is either double positive (ICG+/Dye+) or single positive (ICG+/Dye- or ICG-/Dye+) and para-SLN which is double negative (ICG-/Dye-).

Results: The subcutaneous lymphatic channels were detected precisely in all cases. The identification rate of SLN was 100%, (105/105) with a mean number of 3.7 nodes (range 1–12), double positive nodes were found in 83.8% (88/105) with a mean number of 1.5 (range 0–6). The single positive SLNs, i.e. ICG+/Dye- or ICG-/Dye+ were found in (85/105) and (4/105) respectively. In twenty five cases (23.8%), the SLNs were involved and all of them were ICG positive. BMI is negatively correlated with number of double positive SLN identified (r = -0.2, P = 0.04).

Conclusion: The ICG and patent blue dye technique gives high sensitivity and provides a comparable result to the dye and radioactive technique. Obesity may reduce the number of double positive SLNs identified.

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POSTER

Pre-operative Chemotherapy + Trastuzumab (T) for HER-2 Altered Locally-advanced (LA) Breast Cancer (HER+BC) in Pregnancy

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Background: Induction chemotherapy + trastuzumab produces a high-rate of pathological CR (pCR) in patients (pts) with HER+BC. T is a "Category D pregnancy risk" drug i.e. significant risks, and only to be used during pregnancy when alternatives are worse. Only ten case reports of trastuzumab use in pregnancy have been published. Oligo- or anhydramnios has been reported in approximately 50% of cases, in addition to an increased risk of ectopic pregnancy, fetal and post-natal death, capillary leak syndrome and prematurity. In mice with an erbB2 null allele mutant embryos died before E11, probably due to a lack of cardiac trabeculae. Cardiomyopathy occurs in 0.04% of maternal hearts in otherwise normal pregnancies and erbB2- neuregulin ameliorates cardiac stress. Intercurrent trastuzumab exposure in pregnancy theoretically could pose cardiac risks to mother and fetus. Oncologists traditionally initiate chemotherapy for breast cancer in pregnant women after the end of the first trimester when the risk of teratogenesis is low. We report two additional cases of T in pregnancy, both in the second trimester, for LA Her+BC.

Methods: Series of two pts treated in the same institution with follow-up data.

Results: Case 1: A 35 year old mother was 22 weeks pregnant when diagnosed with LA BC. Treatment induction dose dense doxorubicin+cyclophosphamide chemotherapy sequentially followed by 3 cycles