

mastectomy by Patey utilizing electrocautery which performed processing of surgical wound (all surface of wound) by 0.15% sterile solution of sorbent's suspension "Sillard-P" before application of suture. 1-group consist of 18 patients. 2-group (control group) consist of 60 patients which underwent radical mastectomy by Patey utilizing electrocautery without of wound processing.

**Results:** The existence of seroma in 1-group was short duration and disappeared on 5-th day. In 91% of cases just 3-times puncture was performed. In 8.3% patients had seroma duration about 3 week, which can be explained as not qualitative processing of axillary's region by sorbent's suspension. 85% of patients in control group had seroma with duration about 2 week.

**Conclusions:** Processing of surgical wound by 0.15% "Sillard-P" suspension preventing seroma, decreasing of seroma volume and duration, improve breast cancer patient's quality of life and decreasing in patient's day.

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### Sentinel node biopsy in breast cancer: are there differences according to the time of radioisotope injection?

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**Introduction:** Lymphoscintigraphy is essential for a highly accurate sentinel node (SN) mapping and biopsy. There have been reports supporting the isotope injection in the morning of the surgery and others defending the previous day injection. At our institution we got logistic advantages with the day-before procedure. Nevertheless, we do not know whether this fact results in misidentification or higher number of SN. We compare the results of two groups of patients, trying to assess the differences between them.

**Methods:** We studied a series of 105 consecutive patients with cN0 breast cancer, submitted to the SN procedure, from Jul/99 to Jan/01. Sixty-one received the same-day injection (group A) and 44 received the isotope the day before surgery (group B). We used a combination technique, with peritumoral Tc99m sulphur colloid injection, subareolar Patent Blue V dye injection and gamma-probe detection. Statistical significance was assessed using Chi-Square and Mann-Whitney tests.

**Results:** The two groups are similar according to patient and tumor characteristics. There were no statistical significant differences in the studied variables between the two groups. Although, the results seem to be somewhat better in the day before injection group of patients. Lymphoscintigraphy showed hot spot's in 91.8% of group A and 95.5% in group B patients (p=ns). The mean number of hot spot's was 1.4 in group A and 1.6 in group B patients (p=ns). The mean number of excised sentinel nodes was 1.39 in group A and 1.45 in group B patients (p=ns).

**Conclusions:** These two distinct schedules for radioisotope administration yielded similar results. However, our institutional logistics prompted us to definitely choose the day before injection.

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### Factors determining locoregional control and late sequelae in patients with locally advanced breast cancer (LABC) managed with radiotherapy (RT) as the primary locoregional treatment

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**Introduction:** RT plays an important role in the management of LABC, yet its clinical efficacy still remains far from satisfactory. The aim of this study was to evaluate retrospectively factors determining local control and late sequelae in a large series of consecutive LABC patients managed with RT as the primary locoregional treatment.

**Material and methods:** The records of 261 primarily inoperable LABC patients treated between 1991 and 1997 at two institutions: Medical University of Gdansk, Poland and Velindre NHS Trust, Cardiff, UK were analysed. All patients received megavoltage RT to the breast with two tangential fields, whereas the adjacent lymph node areas were irradiated using customised fields. Due to a large scale of RT doses and fractionation schedules, normalised total dose (NTD) was calculated for all patients using a linear quadratic model. In 241 patients RT constituted the only local treatment

and the remaining 20 patients were subsequently subjected to mastectomy. Most patients received chemotherapy and/or endocrine therapy prior or after RT.

**Results:** Within the median follow-up of 37 months, locoregional recurrence occurred in 95 of 251 evaluable pts (38%). Three-year and five-year locoregional-free survival rates were 59% and 48%, respectively. At multivariate analysis of variables predicting the risk of locoregional relapse, inflammatory carcinoma (p<0.01; RR 1.96), T4 disease (p=0.01; RR 2.58) and involvement of supraclavicular lymph nodes (p=0.04; RR 1.99) were the most significant clinical factors, whereas response to RT (p<0.01; RR 1.52) and NTD (p<0.01; RR 0.75) were the most important therapeutic factors. Increasing the total dose to the tumour by 10 Gy was associated with an average 25% reduction of local relapse. Thirty nine patients (16%) experienced late radiation sequelae. Multivariate analysis showed that radical mastectomy performed after RT was associated with the reduced risk of arm oedema (p<0.01; OR=5.0), whereas neoadjuvant chemotherapy decreased the risk of subsequent teleangiectasia (p<0.01; OR=0.4).

**Conclusions:** Due to large heterogeneity of LABC pts, judicious tailoring of RT, particularly in terms of dose prescribing, is essential to increase the chance of locoregional cure. Therapeutic gain, however should be weighed against the increased risk of late complications.

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### Improved cosmetic outcome by use of 3D-conformal boost RT and remodeled conserving surgery for early breast cancer

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**Purpose:** To evaluate factors determining cosmetic outcome, survival and failure pattern in patients treated with breast conserving therapy for early breast cancer.

**Methods:** From 2/1992 to 5/1999, 219 women with early breast cancer underwent breast RT with various technique of boost RT following various technique of breast conserving surgery. Median age of all pts was 44 yrs old (range 20-67 yrs old) and 170 pts were on premenopausal status. 159 pts underwent quadrantectomy and surgical defect was remodeled with fat reapproximation since 1996. All received tangent whole breast RT with total dose of 50.4 Gy in 28 fractions followed by a boost RT to the tumor bed, 10-15 Gy. Breast only was irradiated in 169 pts and breast and regional nodal area were irradiated in 50 pts. Technique for a boost RT to tumor bed included electron in 45 patients, Ir-192 HDR brachytherapy in 12 pts, 3D-conformal RT in 116 pts and 2D-photof in 6 pts. 20 pts with Tis did not receive a boost RT. 100 patients received chemotherapy concurrently with RT. Median follow-up was 44 mos with a range 3-112 mos. Cosmesis was determined by the physician and patients, scored to be excellent, good, fair and poor.

**Results:** 194 pts were alive without disease at the last follow-up. 5 pts (2%) failed in the breast; 2 salvaged by MRM, 1 salvaged by MRM and CT, 1 alive with disease after MRM and 1 alive with disease, on CT at the last follow-up. 12 pts (5%) developed distant metastasis. 5 yr overall and disease free survival were 94%, 95% respectively. Factors determining the survival include nodal involvement, presence of EIC, lymphatic invasion, number of node involved and multifocality. Chemotherapy was not a factor determining the survival but group of patients who received nodal RT showed poorer survival. 168 pts were scored for the cosmetic outcome at their last follow-up; 114 pts (68%) scored as excellent, 46 pts (27%) as good and 8 pts (5%) as fair.

**Conclusion:** The group of patients who received a boost RT with 3D-conformal and who underwent remodeled BCO showed much improved cosmetic outcome (excellent group was increased from 20% to 70%).

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### The benefit of individualized custom bolus in the postmastectomy radiation therapy: Numerical analysis with 3-D treatment planning

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**Purpose:** With the improved survival rate of patients with breast cancer by postoperative chemoradiotherapy, meticulous radiotherapy techniques to