rates were 64% (25/39) and 70% (30/41) respectively. The hospitals were covered by the Eindhoven Cancer Registry, which enabled the monitoring of actual treatment policy.

Results: In 1995, 9 surgeons (30%) reported to apply BCT to patients with tumours larger than 3 cm versus one surgeon (4%) in 1987. In 1995, the majority of the surgeons considered multicentric tumour growth, diffuse microcalcifications on the mammogram, and extensive intraductal component as contra-indications for BCT. In 1995, a higher proportion reported rather bad or bad experiences with recurrence after BCT, compared with 1987 (37% versus 13%). Cancer registry data showed an increase in the proportion of patients with operable breast cancer, receiving BCT, from 29% in 1984 to 56% in 1989 ($p < 0.001$). Between 1991 and 1993, the proportion decreased to 46% ($p = 0.07$).

Conclusion: The surgeons in southeastern Netherlands reported a greater use of BCT in larger tumours. The slight decrease in the use of BCT might be attributed to a greater awareness among the surgeons about potential risk factors for local recurrence after BCT.

PP-2-24 Variants of Immediate Breast Reconstruction in Breast Cancer Treatment

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Immediate breast reconstruction IBR followed by different oncological operations is a new perspective direction in surgical breast cancer BC treatment that provides all known kinds of patients rehabilitation and allows to preserves the breast as a femininity symbol. The results of 182 IBR in BC treatment are presented, where Stage I had 11 patients (6%), Singe IIA-76 (41.5%), Stage IIIA-12 (8%), Stage IIB-39 (20.3%), Stage IIIB-44 (24.2%).

Various surgical interventions and reconstructions were performed. 65 patients underwent conserving operations following IBR using transposition the part of latissimus dorsi muscle LDM on the site of the removed breast tissue – 40 (22.4%), 12 (6.6%) using musculocutaneous LDM flap, 6 (3.3%) using TRAM or RAM flaps and 7 (3.8%) with silicone implant or tissue expander. 102 patients underwent subtotal breast removal with nipple-areolar, inframammary fold and about 25% of breast tissue conservation following IBR using LDM flap – 80 patients (44%), TRAM or RAM flafs – 20 (11%) and combination of the implant with different flaps – 2 (1.1%). 15 patients underwent IBR after mastectomy using LDM flap 12 (6.5%), using TRAM flap 2 (1.1%) and 1 (0.6%) with implant.

In case of early BC 24 (12.1%) patients underwent only the surgical intervention, in combination with postoperative radiotherapy RT – 47 (25.8%), with pre- and postoperative RT – 9 (4.9%), and with radiochemotherapy RCT – 9 (4.9%). In case of more extended BC (83 patients – 45.6%) together with RCT, 32 (17.6%) underwent endocrine therapy. 15 patients (8.2%) had postoperative complications after IBR connected with partial skin – 6, and partial flap – 1 necrosis. 6 had the total necrosis of transferred flap, 1 – the partial skin necrosis of abdominal wall and 1 had continued bleeding. In evaluation the results of operations among 168 underwent IBR, 28 patients (16.7%) assessed the cosmetic effect as excellent, 96 – (57.1%) as good, 43 – (25.6%) as satisfied and 1 women as non satisfied. During the period of follow-up that consist from 1 till 6 years 4 patients (2.2%) had local recurrence, 3 – (1.6%) distant methastases and 3 – (1.6%) were died of cancer progression.

Preliminary results of IBR after various surgical intervention in different stages of BC demonstrated it advantage compared with traditional approach of treatment particularly in fast psychological, family, sexual, social and labour rehabilitation.

PP-2-25 Axillary Clearance Without Drainage in Breast Cancer

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Prolonged hospital stay after axillary clearance due to lymphorrhea and subsequent seroma is frequent. In order to reduce these consequences selected patients (pts) underwent after lymphadenectomy an axillary padding by tying together the local muscles. No suction drain was installed. From 10.91 to 12.95, 105 women (mean age: 54 y, extremes: 27–85 y) with breast cancer < 35 mm were operated. Previous (12 pts) or concomitant (93 pts) lumpectomy was associated and followed by breast irradiation. A mean number of 14.9 nodes (extremes: 2–28) was sampled and 38 pts had node involvement. Mean postoperative stay was 2.7 days (extremes 1–14). Nine pts had complications treated conservatively: haematoma (3), infection (2), minor wound dehiscence (4). Seroma occurred in 8 pts needing an unique puncture of 50 and 250 ml in only two of them. Twelve pts complained about axillary pain. Median follow-up at the endpoint (3.96) was 20 months (3–53 months). Six pts have recurred distally and one regionally. Functional outcome was good in 91 pts, 7 pts had mild lymphoedema (+2 cm) and 7 residual pain with a limitation of movement in two of them. Postoperative care is reduced with this technique which should be considered for outpatient treatment.

PP-2-26 Axillary Lymphadenectomy without Drainage

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The technique of axillary padding after surgical conservative treatment of a breast cancer was prospectively evaluated through 152 patients, operated on from december 90 to september 91, and regularly followed since them. This technique avoids any axillary drainage, simplifies the post-operative management, and may decrease early morbidity. However, the question of its physiological mechanism remains unanswered. Our results confirm this method's both feasibility and reproductibility. The absence of drainage simplifies and shortens to 2 or 3 days the post-operative stay in hospital, and this appears as its main benefit. However, early seroma are more frequent, and above all, post-operative pain appears twice as important during the following weeks. Nevertheless, the late functional and plastic results are excellent. Experience has thought us that some patients would or could not expect any profit from this procedure, which we consider only within breast-conserving surgery. As a consequence we do not adopt it on a routine basis, but reserve it for individual situations, the patient being clearly informed of its advantages and temporarily painful inconvenients. The ideal technique resolving the every day question of lymphorrhea remains to be found.

PP-2-27 The Organ-Keeping Operations in the Treatment of the Breast Cancer T1–2 NO MO

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The examinations of the results of the organ-keeping operation in case of the breast cancer T1–2 NO MO stages are held. 1433 patients (T1–2 NO MO stages) with the breast cancer had been treated in the mammological department since 1985 till 1992, for whom were done 1218 radical mastectomies in different modifications and 215 organ-keeping operations — from sectoral resections to radical resection. The advance results of the research confirm the advantages of the organ-keeping treatment so that distant results have no differences from radical mastectomy. The mortality was 15% (patients with metastases during 2–72 months). The rate of the relapse of the tumour was 6.5%.

PP-2-28 Seroma as Complication to Surgery in Breast Cancer. Randomized Study Comparing Drainage and Compressive Dressing of the Wound

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Seroma of clinical significance seems to complicate surgery in breast cancer to a great extent. 17–53% in the literature. In our department seroma was found during two former years in 40% of the cases in spite of two suction drains for 1 day and one drain dependent of volume 3–5 days. In the literature there are only a few papers comparing drainage with other alternatives, but single reports concerning use of compressive dressing.

For two years 200 consecutive patients were randomized to two alternative treatments postoperatively in breast cancer surgery. Patients with breast conservation surgery as well as modified radical mastectomy were included in the study. The axillary dissection procedure was identical in the two types of operation. The patients were after randomization treated as follows: Group 1 got two drains; one drain was removed after one day, whereas the other was kept until volume/24 hours < 50 ml, but not longer than 5 days. Group 2 got on the operation table a firm compressive dressing (Tensoplast) placed in a semicircular manner from sternum to columna. Half of the latitude was overlapped. The following parameters were registered: Days in the hospital. Volume of drainage. Analgesics. Wound infections. Frequency of seromas and need of puncture. Volume of this puncture.

Group 1 had significantly longer stay in hospital, 1.3 days longer. This group had also significantly larger need of analgetics of all sorts. But they had significantly fewer punctures for seroma.

Conclusion: Compressive wound dressing is complicated with more seromas in need of puncture, but on the other hand this treatment was favorable compared to drainage concerning use of analgetics, and they could leave the hospital earlier. We are now preparing a new randomized study with one group treated with compressive dressing combined with drainage for 24 hours.

PP-2-29 Axillary Dissection for Breast Cancer: Long-Term Functional Results

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Aim of the study: Evaluation of the long-term functional results after treatment of breast cancer including an axillary dissection (AD).

Patients and methods: Among patients (pts) treated for a breast cancer in the Institute Bergonié, 111 pts (with a minimum and median follow-up after AD of 3 and 6.5 years respectively) were studied on the occasion of a regular follow-up, from 12-1995 to 03-1996. A modified radical mastectomy had been performed in 29.7%, and a conservation treatment in 70.3% of the pts. The median tumor size had been 18.5 mm, a median number of 14 nodes had been removed, and a histological nodal involvement had been observed in 47.7% of the pts. Characteristics of the pts, of the tumors, and of the treatments will be detailed. The functional evaluation was obtained by a medical history, a functional inquiry, and a complete physical examination.

Results: Pain in shoulder and arm, weakness in the arm, impaired shoulder function were observed in 31%, 30%, 13%, of the pts respectively. Serious or moderate lymphoedema occurred in 10% and 9% of the pts respectively. A high frequency of late symptoms was significantly correlated to the number of removed nodes, to the number of involved nodes, and to the irradiation of the scar. As concern the breast conservation, no difference was observed.

Conclusion: For pts with breast cancer whose treatment includes an AD, the incidence of moderate or serious adverse side-effects remains high. Further studies, preferably randomized, should be planned in order to evaluate the absence of AD in some selected cases.

PP-3. Local treatment (September 11)

ORAL PRESENTATIONS

PP-3-1 Ductal Carcinoma in Situ (DCIS) of the Breast: About 706 Cases Examined from 1971 to 1995

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DCIS of the breast is occurring with an increasing frequency mostly because of a large use of mammography screening. A better knowledge of this type of breast cancer has led the traditional role of mastectomy for DCIS to be challenge by breast conservative procedures.

The aim of this study is to analyse both diagnosis and treatment procedures used for patients suffering from DCIS who attended our Institute from 1971 to 1995. Patients were included in the study on the basis of histological diagnosis of DCIS. Computerized patient files were retrospectively analyzed allowing to collect patients characteristics, circumstances of diagnosis, mammographic findings and treatment procedures. After treatment, follow up data including clinical examination and mammography were yearly reported for all patients.

706 patients aged 19 to 88 (mean 51.3) were included in the study; 281 (39.8%) of them were postmenopausal women. Circumstances of diagnosis were clinical findings (i.e tumor, Paget's disease or galactorrhea) (43.3%), mammographic abnormalities (50.2%) or occasional discovery (6.5%). Positive mammographic findings were obtained in 87% of patients and mainly represented by microcalcifications (79.4%). Treatment procedures were breast conserving surgery (BCS) alone (37.5%), BCS followed by radiation (25.5%) or mastectomy (37%). The actuarial local recurrence was 7.55% after 77.5 months of follow up.

PP-3-2 Ductal Carcinoma in Situ: Radiosurgical Conservative Treatment in 122 Cases. Analysis of Local Recurrence Factors

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Material: From January 1980 to July 1992, 122 consecutive cases of DCIS underwent conservative surgery in three major hospitals of Strasbourg area. All received complementary irradiation in the Paul Strauss Centre. The median age was 51 years. 69 women were menopausal. According to TNM classification, we found 88 T0, 11 T2, 20 T1, 3 Tx.

Treatment: 21 quadrantectomies and 101 lumpectomies were performed, with axillary dissection in 67 cases. All women received whole breast irradiation by cobalt photons at 46–54 Gy with a scar boost by electrons at 8–12 Gy. 46 women received Tamoxifen.

Histology: DCIS was pure in 106 cases, and with associated LCIS in 16 cases. The excision was complete in 109 cases and doubtful or incomplete in 13. Nuclear grading, analyzed in 84 cases, showed: 9 G1, 42 G2, 23 G3 and 10 G4.

Results: With a median follow-up of 65 months, we observe 10 (8.2%) local recurrences (LR), all in or near the previous tumor bed, with a mean delay of 46 months after initial surgery. Four LR were still DCIS, but 6 were invasive. The salvage treatment consisted of a mastectomy for all the 10 LR. One woman, still alive, developed metastasis. Two women died from other cancers. The only significant risk factors of LR, in multiple regression analysis, are the large histologic size ($p = 0.02$) and small breast size ($p = 0.03$). A tendency to significance was noted for incomplete resection, high nuclear grading and total tumor dose less than 60 Gy.

PP-3-3 Is Axillary Node Dissection (A.N.D.) Useful for Microinfiltrative Breast Carcinoma (MIBC)?

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From 1970 to 1995, 5626 patients (pts) with operable non metastatic breast carcinoma underwent initial surgery at Institut Bergonie. MIBC represented 268 cases (4.7%). Tumors were non palpable (TO) in 53% (142/268), palpable in 126/268 with a median size of 3 cm. Among the 268 patients, 11.6% (31/268) did not have A.N.D.; 237 pts (88.4%) had A.N.D. with mastectomy in 194/237 pts (81.8%) or conservative surgery in 43/237 pts (18%). After nodes analysis, 90% of pts (214/237) were N–, 10% (23/237) were N+. Nodal involvement was present in 6.4% of TO and 11% of palpable tumors.

Most of nodal involvement was limited with 1 node involved in 78%. Most patients with N– tumors (169/214) (79%) did not receive any adjuvant treatment, 19.2% (41/214) had radiotherapy and 2.8% (6/214) adjuvant chemotherapy; 65% of pts (15/23) with N+ tumors had adjuvant chemotherapy, 13% (3/23) had hormonotherapy and 26% (6/23) had no treatment.

With a median follow-up of 89 months, N– pts had significative better survival than N+ ($p = 0.0006$).

Due to low rate of nodal involvement, we may wonder if A.N.D. could be avoided for non palpable MIBC. Randomized trial is on going to answer this question.

PP-3-4 10 Years Experience in External Beam Radiotherapy and Interstitial HDR 192 Iridium Implantation in the Treatment of Breast Cancer

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The authors present survival data of a prospective treatment method and demonstrate the safe use of Ir-192 high dose rate (HDR) implantations.

Since 1984 HDR Iridium-192 brachytherapy has been used to deliver an interstitial boost to the primary site in conservative breast cancer treatment. Up until December 1993 508 patients with 513 tumours have been treated (T1: 341, T2: 172, N+: 146, N–: 367). Treatment method included external beam irradiation of 45 to 50 Gy to the breast followed by an interstitial 10 Gy boost. Mean follow up of survivors: 69 months (27 to 137).

5-years actuarial data (10-yr. data in brackets): Overall survival: 88.1% (69.7%), local control: 95.9% (89.7%), disease free survival: 84.5% (75.0%), and disease specific survival: 91.8% (77.1%). There were no severe complications, except 1 patient with periostitis and neuralgia. The cosmetic results are very satisfactory.

Conclusion: The use of a HDR source in boosting the primary tumour