of therapy. The efficacy analysis revealed a 36% objective response rate with another 28% of patients having disease stabilization.
Conclusion: The combination of PLD with Cyclophosphamide given every 3 weeks is a safe and active combination in advanced breast cancer patients who relapse more then one year after completion of adjuvant therapy with anthracyclines.

468 PUBLICATION

Safety and efficacy of first-line docetaxel (DXL) – gemcitabine (GMZ) in metastatic breast cancer (MBC)

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Purpose: New combinations and strategies have been developed over the past 10 years including new drugs such as taxanes and gemcitabine and this design demonstrates the feasibility of the most effective drugs, while minimizing toxicity. DXL–GMZ has shown significant activity against mbc in a lot of studies.
Methods: from November 1998 to January 2000, 42 patients have been enrolled in the study and all patients had previously received adjuvant therapy.
Treatment: Patients received DXL: 75 mg/m^2 day 1+GMZ: 1250 mg/m^2 day 1 and day 8, every 3 weeks without growth factor support. median age was 57.5 years (range 27–74).
Results: Complete response was observed in 22.5% (9 patients) and partial response in 57.5% (24 patients) with an overall response rate of 80%. The probability of one-year survival was 83.5%. Main grade * toxicities were Neutropenia in 12.5% (5 patients) and Anaemia in 7.5% (3 patients). Nausea and vomiting grade 2–3 were in 19.2%.
Conclusion: DXL + GMZ is an active regimen in mbc. This scheme is of an easy administration, very well tolerated and effective in patients with MBC relapsing after an anthracycline based adjuvant treatment.

469 PUBLICATION

Allogeneic hematopoietic cell transplantation for metastatic breast cancer

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To describe the efficacy of allogeneic hematopoietic cell transplantation for metastatic breast cancer, we reviewed registry data from 16 centers participating in the Center for International Blood and Marrow Transplant Research and the European Group for Blood and Marrow Transplantation between 1992 and 2000. Probabilities of transplant-related mortality (TRM), graft-vs-host disease (GVHD), disease relapse or progression, progression-free survival, and overall survival were determined. Seventy-five patients were identified from the registries; median age at transplant was 41 years (range, 25–60) and the median follow-up time for survivors was 25 months (range, 3–64). Thirty-nine patients (52%) received myeloablative conditioning regimens and 36 (48%) were given reduced-intensity conditioning (RIC) regimens. Patient characteristics were similar between the two groups except that more patients in the RIC group (72%) had low performance status than did those in the myeloablative group (26%). More patients in the myeloablative group had acute GVHD (46% vs 33% in the RIC group) at 100 days, chronic GVHD at 1 year (39% vs 8% in the RIC group), and 100-day TRM (26% vs 7% in the RIC group). Overall response rates (complete or partial response) were 31% for the myeloablative group and 29% for the RIC group. Nine of 38 patients (24%) who underwent immune manipulation after transplant showed disease control, providing direct evidence of a graft-vs-tumor effect. Further, multivariate analysis showed that the presence of acute GVHD after an RIC regimen reduced the risk of disease relapse or progression but did not affect progression-free survival.
The presence of disease control in association with acute GVHD suggests the existence of a graft-vs-tumor effect in heavily pretreated metastatic breast cancer patients.

470 PUBLICATION

Interim analysis of a Phase II study of biochemotherapy in metastatic breast cancer (MBC)

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Background: Breast cancer is moving on from being lethal, towards chronic, owing to the availability of targeted therapy.
Objective: To determine the response rate, time to disease progression and overall survival.
Methods: Women were eligible if they were; histological confirmed invasive infiltrating carcinoma, HER-2/neu FISH positive MBC. PS 0–2 with adequate renal, liver and hematological functions. Trastuzumab was given 4 mg/kg loading dose then 2 mg/kg and vinorelbine 25 mg/m^2 weekly. The regimen was continued until progression of disease or undue toxicity experienced or patient herself withdraws consent.
Results: We have thus accrued 25 patients, mean age of 53 yrs. The first line in 08%, second line in 32%, third line in 48% and fourth line 12% of the cases. Over half of patients had bony metastases; single visceral metastatics were present in 24%, multiple visceral metastatics were present in 48%. The overall response was 72% and stable disease was observed in 12%, progressive disease in 16% of the cases. Time to disease progression and survival data will be mentioned in the final analysis. Five grade-3 toxicities, including two cardiomyopathies were noted.
Conclusion: Bio-chemotherapy with weekly Trastuzumab in combination with Vinorelbine yields an impressively high response rates, with acceptable toxicity profile in this ongoing Phase II study in metastatic breast cancer in Pakistani Women. We caution that this is an interim analysis, and final data will be available in about two years.

471 PUBLICATION

Letrozol in the treatment of metastatic breast cancer

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Background: The aim of the stady is to establish the treatment power of Letrozole in women with metastatic breast cancer.
Patients and methods: Forty four postmenopausal women mean age 59 years were included in the stady. Distribution of the patients by stages is: 20.4% operated in stage I, 45.5% – in stage II, 22.7% – in stage III, and 11.4% have been diagnosed in stage IV. The last group of patients had cyological confirmation of the disease only. Histologicaly there were 30 invasive ductal, and 9 invasive lobular cancers. All of the patients had positive hormonal receptors, except of the 5 nonoperated patients (unknown receptors). Adjuvant therapy included anthracycline containing chemotherapy FEC (Farmorubicin, Cyclophosphamide, 5-FU) in standard doses in 31.8% of the patients, CMF (Cyclophosphamide, Methotrexate, 5-FU) – 31.8%, CNF (Cyclophosphamide, Novantrone, 5-FU) – 6.8%. Most of the patients received Tamoxifen (79.5%). Twenty nine patients (65.9%) had metastatic disease in one organ or system, and 15 (34.1%) – in two or more organs or systems. Twenty five patients (56.8%) had bone metastases, 16 (36.4%) – soft tissue metastases, 9 patients (20.5%) – lung metastases, and 9 patients (20.5%) had liver metastases. Twenty patients (45.4%) received Letrozole as a first line therapy for metastatic disease, 54.6% – as a second line after chemotherapy. The mean treatment duration was 12.63 months (5–13 m.) in dose 2.5 mg/d.
Results: Letrozole was very well tolerated. ORR was 63.6% including 2 CR (soft tissue metastases), 4 PR (1 patient with soft tissue metastases, 1 with lung metastases, 2 patients with liver metastases), and 34 SD with improvement of Karnofsky PS. Four patients (9.1%) with more than one metastatic site had progressive disease. Survival data are expected.
Conclusion: Letrozole is a high power aromatase inhibitor for the treatment of patients with metastatic breast cancer, including those with asymptomatic visceral metastases.

472 PUBLICATION

Preoperative chemoradiotherapy of locally advanced breast cancer

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Purpose: To assess the efficacy of neoadjuvant chemotherapy and accelerated radiotherapy in breast cancer patients by evaluation of postoperative morphological changes.
Methods and materials: Between March 2001 and March 2005 31 patients with stage IIB-III breast cancer were treated. For majority, the induction chemotherapy consisted of two-four courses (doxorubicin or epirubicin, cyclophosphamide and 5-fluorouracil, on the first day of a 21-days cycle – 21 patients). 10 pts were treated by two drugs: paclitaxel

and doxorubicin or paclitaxel and navelbine. Two weeks later accelerated radiotherapy was begun. The breast and internal mammary chain were irradiated with two tangential fields, nodes – with anterior irregulary shaped field. Linear accelerator (6 MeV) was used to deliver 2 Gy per fraction, b.i.d., for 5 days/week up to a total dose of 44 Gy to breast and 40 Gy to regional lymphatic nodes. Radical mastectomy was performed after three-four weeks rest period.
Results: The overall objective preoperative response rate was 93.5%. When the postmastectomy histopathological examination was performed, there was no evidence of primary tumour in five (16%) cases. There were found only devitalized single tumour cells in 7 (22.5%) postmastectomy breasts, and another five speciments presented significant tumour destruction. In 12 (48%) patients of 25 with initially involved lymphatic areas, the nodes turned out to be morphologically intact. There were no serious reactions and toxicity during and after treatment. In 5 cases we observed delayed healing of postoperative wound. Indurative subcutaneus fibrosis occurred in 3 womens. During the follow-up period there were 4 (12.9%) deaths due to disease progression.
Conclusion: Accelerated preoperative irradiation in combination with chemotherapy is effective treatment of breast cancer. Our technique allows performing mastectomy and adjuvant chemotherapy without a significant delay. Overall time of radiation treatment was only 15 days. This regimen proved to be safe with accepted toxicities. It seems to be reasonable not to replace preoperative irradiation by chemotherapy but to combine these treatment modalities.

473 PUBLICATION

High-dose chemotherapy and autologous peripheral blood stem cell transplantation in metastatic breast cancer. Updated results of a single center

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Introduction: High-dose chemotherapy is not standard in the treatment of breast cancer, neither in the adjuvant nor in the metastatic setting. In this retrospective study, we aimed to review the interim data of metastatic breast cancer patients who underwent high-dose chemotherapy (HDC) and autologous peripheral blood stem cell transplantation (APBSCT) in our BMT center.
Material and methods: Between October 1984 and March 1997, 28 patients with metastatic breast cancer were treated with HDC and APBSCT. Their ages ranged from 23 to 63 years with a median age of 35 years. The time from diagnosis to transplant ranged from 109 to 2470 days with a median of 717 days. The number of their previous chemotherapy cycles ranged from 4 to 18 with a mean of 9. Their preparative regimens were: CNV (n = 19): Cyclophosphamide 2.4 g/m^2, mitoxantrone 35 mg/m^2, etoposide 250 mg/m^2/d *6 days; ICE (n = 8): Ifosfamide 2.5 g/m^2/d *6 days, carboplatin 250 mg/m^2/d *6 days, etoposide 250 mg/m^2/d *6 days; CNP (n = 1): Cyclophosphamide 60 mg/kg/d *2days, mitoxantrone 35 mg/m^2, carboplatin 200 mg/m^2/d *6 days. In the posttransplant period, 20 patients received G-CSF (granulocyte colony stimulating factor), 6 patients GM-CSF (granulocyte-monocyte colony stimulating factor), and 2 patients received no GF.
Results: Recovery to $\geqslant 1 \times 10^9$ leukocyte/L occurred at a median of 11 days, platelet recovery to $\geqslant 20 \times 10^9$/L was 13 days. A mean of 3.3 units of red cell suspensions and a mean of 2.8 units of platelet suspension were transfused. The mean hospitalization duration was 13 days. After median follow-up of 1010 days (range 3–2921 days), the survival probability at five years was calculated as 25%. The transplant related mortality was 10.3%.
Conclusion: The place of HDC in metastatic breast cancer is still controversial. Further randomized studies with more patients and longer follow-up are needed to clarify this issue.

474 PUBLICATION

Efficiency of Toremifen and Letrozol in the treatment of patients with advanced breast cancer

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Background: For the last years the discussion and researches about efficiency and sequence of use of antiestrogens and aromatase inhibitors in the treatment of advanced breast cancer have not been stopping. For many years antiestrogens (Tamoxifen and Toremifen) were considered standard medicines of first line in the treatment of postmenopausal women with advanced breast cancer. Last years results of researches which have demonstrated advantages aromatase inhibitor Letrozol over Tamoxifen as first line therapy at the patients with advanced breast cancer were published. At the same time did not investigate comparative efficiency high doses of Toremifen and Letrozol. The aim of this trial is comparative study of Toremifen and Letrozol efficiency in the treatment of patients with advanced breast cancer.
Material and methods: 451 receptor statuses not considered patients with advanced breast cancer were involved in this clinical trial. Patient were divided on 4 groups/Hormonal therapy with Tamoxifen at a dose of 20 mg once daily was administered in 117 patients – I group, hormonal therapy with Toremifen at a dose of 60 mg once daily was administered in 115 patients – II group, 106 patients (III group) received Toremifene at a dose of 240 mg daily, 113 patients (IV group) were treated with Letrozol at a dose of 2.5 mg once daily. Patients continued on study medication until disease progression. Efficiency of treatment was determined with following criteria: objective effect, side effects and duration of remission.
Results: In the first group 30(25.6%) patients, in second group 38 (33.0%) patients, in the third group 44 (41.5%) patients, in the fourth group 40 (35.4%) had objective effect. Median remission time of 9.2; 11.3; 14.5 and 13.1 months. Side effects in all groups were not significant, did not require specific correction and delay of the treatment.
Conclusions: Our data indicated about advantages of Toremifen compared to Tamoxifen and comparable efficiency compared to Letrozol. On the base of the data we can recommend Toremifen for wide use as first line hormone therapy of patients with advanced breast cancer.

475 PUBLICATION

Clinical experience with trastuzumab in metastatic breast cancer

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Background: Trastuzumab (Tmab) is a monoclonal antibody used in the treatment of metastatic breast cancer (MBC) overexpressing c-erbB2 where it has been shown to improve time to progression, duration of response to chemotherapy and survival time.
Material and methods: We conducted a retrospective cohort analysis of patients (pts) with MBC overexpressing c-erbB2 (imunohistochemestry (IHC) 3+ score or positive FISH staining) treated with Tmab between Jun 2001 and Dec 2004 in Oporto's Instituto Português de Oncologia. Data was collected on demographics, tumour histology and stage, type and timing of all treatments offered as well as data on Tmab use. Outcome measures were time to progression (TtP) and survival after initiation of Tmab therapy. Statistical analysis was performed with SPSS 12.0.
Results: Fifty three pts were treated with Tmab. Their mean age at breast cancer (BC) diagnosis was 47.3 years (SD = 10). Initial stage grouping were: stage I in 6 pts, stage II in 10 pts, stage III in 30 pts and 7 had metastatic disease. Ductal invasive carcinoma was present in 49 (92.5%) pts, micropapilary carcinoma in 3 pts (5.7%) and 1 pts had carcinoma with no other specification. Positive estrogen receptor (ER) was present in 35 pts (67%) and 23 (44%) had positive progesterone receptor (PR). c-erbB2 overexpression was determined by IHC in 47 pts (89%) and by positive FISH in 6 pts (11%).
Radical mastectomy was the first treatment of 23 pts (43%), lumpectomy in 12 pts (24%) and chemotherapy was the initial treatment of 18 pts (33%). On the first relapse, 25 pts (48%) were treated with chemotherapy and Tmab was a first line palliative treatment in 19 pts (39%). Twenty-three patients developed minor side effects and only one patient had to stop Tmab because of cardiotoxicity.
Follow up was complete for all pts. Overall mortality was 46% (n = 23). The median survival time was 20 months. Survival was worse when pts had negative PR (p = 0.01 Log Rank [LR]) and age > 50 at BC diagnosis (p = 0.004 LR). The median TtP after initiation of Tmab was 10 months. PR negative pts (p = 0.045 LR), age at BC diagnosis > 50 (p = 0.004 LR) had a significative lower median TtP. We found no association between ER status or histologic grade and survival or TtP.
Conclusions: Tmab was an active and well tolerated drug in women with MBC and c-erB2 overexpression. In our series PR status and younger age a BC diagnosis were surrogate markers of improved response to Tmab therapy.

476 PUBLICATION

Weekly Docetaxel seems to be as effective but better tolerated than 3 weeks Docetaxel

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Considering the fact that weekly Paclitaxel was demonstrated to be as effective but less toxic than 3 weekly Paclitaxel, we evaluated the same