1191 PUBLICATION

TREATMENT RESULTS IN CANCER OF THE VULVA—ANALYSIS OF 113 CASES

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Objectives: Vulvar cancer is uncommon, representing about 4% of malignancies of the female genital tract. This study was undertaken to examine the clinical management and outcome on the background of different prognostic factors.

Material & Method: 113 documented cases of vulvar cancer were treated between 1982–1989. The TNM classification was used: T1—30 Patients, T2—42, T3—37, T4—4 patients. The median age was 73 years. The treatment consisted surgery or surgery in combination with radiotherapy, or radiotherapy alone.

Results: The mean survival in T1-tumors (30 patients) was 26.4 months, in T2-tumors (42 patients) 20.4 months, and in T3-tumors (37 patients)—15 months.

Conclusions: The most important prognostic factors were lymph node involvement, stage, histologic type, lymphangiosis. Radiation therapy is likely to have an important role in the clinical management of patients with vulvar cancer.

1192 PUBLICATION

SERUM SOLUBLE INTERLEUKIN-2 RECEPTOR AND SOLUBLE CD8 LEVELS IN PATIENTS WITH GYNECOLOGICAL MALIGNANCIES UNDERGOING RADIOTHERAPY

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Immunosuppressive factors in serum have been implicated as one of the possible causes of depressed cellular immunity associated with cancer. Special interest has been recently payed to soluble forms of CD25 and sCD8. Thirty women with endometrial and cervix carcinoma were studied before and after radiotherapy. Absolute count of CD3, CD4, CD8, CD19, CD25 lymphocytes were normal before radiotherapy. The level of serum sCD25 and sCD8 evaluated using ELISA significantly increased before treatment normalized after radiotherapy. The values were corrected according to absolute lymphocyte count. Number of CD8+ cells and CD25+ cells did not decrease significantly after therapy suggesting that shedding/production of sCD25 and sCD8 takes place in the involved tissues. Evaluation of sCD25 and sCD8 is valuable test in the monitoring the clinical course of the disease.

1193 PUBLICATION

INITIAL *IN VITRO* EXPERIENCE WITH GEMCITABINE AND CARCINOMA OF THE UTERINE CERVIX

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An *in vitro* study of the effect of gemcitabine on primary human cultures of carcinoma of the cervix is being conducted. The cultures are grown from biopsies done on patients participating in a Gemcitabine in Cervix Carcinoma study. Gemcitabine is known to be active in the treatment of cervix carcinoma. The aim of the *in vitro* study is to correlate responses achieved in patients, to those responses achieved *in vitro*. Biopsies from patients were dissociated in 0.1% collagenase solution then exposed to 50 μm and 100 μm concentrations of gemcitabine in growth medium (Ham's F12) for 1 hour followed by a thorough rinsing. The 50 μm gemcitabine level was based on an approximate maximum plasma concentration reported in cancer patients who received 1500 mg/m^2. Cells seeded on 0.3% Bacto-agar containing Ham's F12 medium with 15% foetal calf serum. Cell colonies in all flasks were subsequently scored and compared with controls after 28 days in culture. Of the 36 patient biopsies processed 7/36 (19%) were unsuitable for culture and 6/36 (17%) were lost to sepsis or illustrated no growth, 23/36 (64%) cultures were successful and provided colonies of at least 30 cells. Of the latter, 6/23 (26%) experienced at 52% or greater growth suppression at 50 μm gemcitabine and 10/23 (43%) at 100 μm. At this time, it is too early to correlate the response rates *in vivo* and *in vitro* as all clinical data is not yet available for analysis. Both studies are ongoing.

1194 PUBLICATION

TREATMENT RESULTS IN RECURRENT CERVIX CANCER: THE VALUE OF RADIOTHERAPY

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Objectives: Recurrence of cervix cancer is a discouraging clinical entity. The present study demonstrates the clinical management and the resulting benefit for patients.

Design: 87 patients with cervix cancer recurrence were evaluated for stage, primary treatment, recurrence free interval *(RFI)*, localization of recurrence, second-line treatment strategies and survival.

Results: 80.5% of recurrences occurs in the 24 months after primary treatment. Survival after treatment *(RT)*: average 15.4 months. Local recurrence *(LR)*: T1-tumors 56.2%, T2—43.8%, T3—38.1%; metastasis *(M)*: T1—21.9%, T2—31.2%, T3—57.1%; combination of *LR & M*: T1—21.9%, T2—25%, T3—4.8%.

Conclusions: The results suggest the need for accurate aftercare and the efficiency of recurrence treatment in cervix carcinoma, especially in vaginal metastasis.

1195 PUBLICATION

CLINICAL STAGE IIB CARCINOMA OF THE UTERINE CERVIX TREATED WITH INTRACAVITARY RADIATION THERAPY AND RADICAL SURGERY

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Between 1977 and 1986 41 patients affected by cervical carcinoma, clinical stage IIB, underwent intracavitary radiation therapy followed by radical surgery within 4 to 6 weeks from the irradiation. Reassessment of pathology was carried out in all the operative specimens. Failures were classified as local, distant and local & distant. Disease free and overall survival have been calculated. Complications have been classified according to the Franco-Italian glossary.

Overall survival according to type of surgery (abdominal and vaginal hysterectomy 90% and 49% respectively, $P = 0.001$), nodal involvement (N× = 40%, N− = 95% and N+ = 71%, $P = 0.001$) and residual tumor in cervix ($\leq$50% = 77% and $\geq$50% = 78%) have been calculated. The results are discussed and compared to the data of the literature.

Ewing's sarcoma

1196 ORAL

CONSERVATIVE RESECTION WITHOUT RADIOTHERAPY FOR LOCAL CONTROL OF EWING'S SARCOMA

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Background: Adequate local control of Ewing's sarcoma can be achieved with radical surgery or conservative surgery and radiotherapy, the latter combination often used to improve functional outcome. Concern has been raised, however, regarding deleterious late effects of radiation in this young population. We report three cases that have been treated with limited resection alone for local control.

Methods: The patients presented with Ewing's sarcoma originating in the proximal humerus, proximal tibia and proximal femur. Ages were 16–30 years. Preoperative chemotherapy consisted of VAC alternating with VP-16/ifosfamide or VAC/dacarbazine for 2.5–10 months. Resection of the residual MRI abnormality with placement of an allograft (2

cases) or a prostheses (one case) was then performed. Resection was considered wide in two cases and marginal in one. All margins of resection were pathologically free of tumor. Chemotherapy was continued in two cases for an additional 2 and 7 months.

Results: All patients are alive with no evidence of disease 1.2, 3.5 and 4 years after diagnosis. One patient suffered allograft fracture and needed reconstruction 11 months after initial surgery. All patients had excellent functional outcome.

Conclusions: Conservative resection alone may be sufficient for local control in selected patients with extremity Ewing's sarcoma. This approach may reduce treatment related morbidity and deserves further study.

1197 ORAL

MULTIDISCIPLINARY TREATMENT OF EWING'S SARCOMA: RESULTS OF THE CESS 81 AND 86 STUDIES

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Combined modality treatment has improved the prognosis for Ewing's sarcoma. The impact of surgery ± radiotherapy on prognosis was evaluated in 272 protocol patients (pts) treated according to the CESS 81 and 86 studies, 1981–1991. The estimated relapse-free survival at 13 years is 57%. 76 pts (28%) had radiotherapy and 193 (71%) surgery ± radiotherapy. The incidence of local or local/systemic recurrences was 14% for the whole group, 8% with surgery ± radiotherapy and 29% with radiotherapy. The incidence of systemic relapse was 24% for the whole group, 28% with surgery ± radiotherapy, and 14% with radiotherapy. In pts with small tumors (<100 ml), local recurrences were 5% with surgery and 28% with radiotherapy, in pts with large tumors 8% after surgery and 32% after radiotherapy. Systemic recurrences with small tumors were 24% after surgery and 0% after radiation, with large tumors 30% after surgery and 21% after radiotherapy. When the resection was radical or wide the local recurrence rate was 5%, compared to 14% with marginal or intralesional resections. It is concluded that surgery adds to the safety of local control, but seems to be associated with more systemic disease.

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1198 ORAL

TREATMENT OF LOCALIZED EWING'S SARCOMA IN YOUNG ADULTS. A STUDY OF THE FRENCH SOCIETY OF PEDIATRIC ONCOLOGY

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From January 1988 to January 1992, 141 patients entered the EW88 protocol based on the chemotherapy (CT) used in St. Jude Hospital since 1978 (*JCO* 7, 208–213, 1989). Among them, 44 were young adults (15 to 35 yrs, median 20 yrs).

Induction CT consisted in Cytoxan 150 mg/m^2 p.o. × 7 days followed by Adriamycin 35 mg/m^2 IV on day 8 for 5 courses beginning days 1, 15, 29, 50 and 71. Surgery was recommended whenever possible. Radiation was based upon the quality of surgery and the histological response to CT. Maintenance CT was based on vincristine + actinomycin and cytoxan + adriamycin. Total duration of therapy was 10 months. In March 1995, median follow-up of the cohort was 64 months (38–87 m). Outcome was similar in adults and children.

	97 pts < 15 yrs	44 pts ⩾ 15 yrs	
no. pts without initial control	0	4	
no. pts with local relapse	21	8	
no. pts with isolated metastases	17	12	
5 year DFS	58% (±10)	52% (±15)	N.S.
5 year Survival	64% (±10)	65% (±15)	N.S.

1199 ORAL

ADULT EWING'S SARCOMA—THE ROYAL MARSDEN EXPERIENCE

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We report a series of 70 consecutive patients (pts) treated on the Adult Sarcoma Unit since 1980 for the Ewing's group of tumours. All pts had a diagnosis of Ewing's sarcoma, Askin's tumour or PNET confirmed after local histology review. Characteristics: median age 24 yrs (14–65); 46 M, 24 F; 12 upper limb, 21 lower limb, 3 head and neck, 11 chest wall, 11 pelvis and 7 other primary sites. 5 pts presented with disseminated disease and no definite primary. Chemotherapy was predominantly IVAD3 (30 cases), VAC in 7 cases, and a dose intensive regimen of ifosfamide, etoposide and cyclophosphamide + G-CSF in 5 cases. Surgery and radiotherapy were used for local control. 5 pts had high dose chemotherapy with ABMT or PBSC rescue. 15 pts, were lost to follow up after a median of 7 months. Of the remainder 28 (51%) have died, 4 (7%) are alive with residual disease, 3 (5%) are on treatment for relapsed disease and 6 (11%) have yet to complete induction therapy. 14 patients (25%) are alive and disease free with a median follow-up of 33 months (10–102 mths). The poor survival in this group is explained by tumour bulk >100 ml in the majority of pts. There is clearly a need for further studies to determine the role of dose intensification and high dose chemotherapy with PBSC rescue, which are currently underway.

1200 ORAL

ADULTS WITH EWING'S SARCOMA: A RETROSPECTIVE STUDY OF 146 CASES

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From 1982 to 1992, 146 adults with Ewing's sarcoma, have been treated for their first tumoral event in 3 french cancer centres. There were 91 males and 56 females. The median age was 20.2 (16–55) years. As regards site, 62 pts (42.5%) had extremity lesions, 57 pts (39%) had axial tumor (vertebra 8%, pelvic 31%), 13 pts (9%) had rib primary lesion, and 14 pts (9.5%) had extraskeletal disease. 41 pts (28%) were metastatic at diagnosis. Chemotherapy was the first treatment in 90% of the no metastatic patients and 88% of the metastatic patients were treated with curative intent. All patients could receive more than 90% of the previous dose of chemotherapy, although 53 pts received a regimen initially designed also for pediatric pts. In 66 pts (45%) surgery was done as part of local treatment, of those 45 pts were given post operative radiotherapy. Radiotherapy was performed in 119 pts with a median dose of 45 Gy; 23% of the patients received less than 50 Gy. With a median follow-up of 5 years, overall survival (OS), metastatic free survival (MFS) and local recurrence free survival (LRFS) were and for the no metastatic and the metastatic pts: 50.3%/7% ($P < 0.0001$); 47.8%/5% ($P < 0.0001$); 66.3%/46.3% ($P < 0.0001$) respectively. The analysis for prognostic variables in 105 M-pts is presented below:

	OS	DFS	MFS	LRFS
Histologic response	36.5/85.5	30.4/43.4	36.2/52.8	
0, 1, 2/3, 4	$p = 0.003$	$p = 0.02$	$p = 0.03$	
Sex F/M	44.6/65.3	37.5/44.8	40.4/53.7	
	$p = 0.04$			
Sites extremity	61.3	47.4	47.97	74.3
pelvic	38.2	28.3	33.1	52.6
vertebra	0	0	40	0
central	26.2	17.4	39.9	56.4
chest	85.7	51.4	68.6	80
extraskeletal	88.9	62.2	62.2	89.9
	$p = 0.05$	$p = 0.02$	$p = 0.06$	
	$p < 0.001$	$p < 0.001$		

Prognostics factors correlated with a poor overall survival were female gender, axial tumor localization and poor histologic response to initial chemotherapy. In conclusion, from this series, natural history and evolution did not show out to be different for Ewing sarcoma occurring in children. Moreover pediatric chemotherapy protocols appeared to be correctly tolerated. As in pediatric pts, novel approached had to be designed for M+ and poor responders to initial chemotherapy.

1201 ORAL

CONSOLIDATION WITH BUSULFAN AND MELPHALAN FOLLOWED BY HEMATOPOIETIC STEM-CELL TRANSPLANTATION (SCT) IN CHILDREN WITH POOR PROGNOSIS EWING'S SARCOMA

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From July 1989 to December 1995, 16 children with metastatic Ewing's sarcoma or PNET were treated with high-dose chemotherapy (HDC) consisting of Busulfan (600 mg/m^2) and Melphalan (140 mg/m^2) followed by autologous SCT. Eight/16 were metastatic at diagnosis: 6/8 were consolidated in first intention and 2 after treatment of a metastatic