caused by endometrial cancer. Nowadays, scoring systems have become acceptable in medicine as less invasive, adequate, and precise diagnostic method. The main goal of this study was to exame statistical significance of clinical-sonography scoring system as a noninvasive diagnostic method for endometrial cancer.
Material and methods: It was a prospective study and 122 patients with postmenopausal bleeding were included. Transvaginal sonography was performed before curettage. Patients were divided into the two groups (A and B), after final histopathological findings obtained by curettage. Group A consisted of patients with endometrial cancers and group B of patients without endometrial malignancy. Clinical-sonography scoring system named ONKO 1 have been created. Each patient got her own score by using the parameters for scoring systems obtained by anamnesis, clinical exam, and transvaginal ultrasonography. Evaluations of these clinical-sonography scoring systems were performed by using test for diagnostic accuracy and receiver operating characteristic (ROC) curve.
Results: Patients with endometrial cancer were older: 64.49 vs. 58.81 years, length of corpus uterus was longer: 6.41 vs. 5.25 cm, and postmenopausal period was longer: 13.67 vs. 9.11 years. All parameters were statistically significant. Average value of clinical-sonography scoring system ONKO 1 in group A was 9.14, SD $\pm$ 2.32 and in group B was 7.13, SD $\pm$ 3.07. There was found statistically significant difference between group A and group B of patients using this scoring system.
Conclusion: Postmenopausal bleeding caused by endometrial cancer is usually diagnosed in older patients. It was possible to distinguish high risk patients with neoplasia from those with benign changes of endometrium using the clinical-sonography systems ONKO 1. There was statistically significant difference between scoring values of these groups of patients."Cut-off" value was *6 for ONKO 1 scoring system. Nevertheless, histopathological examination is still unavoidable in final diagnosis of endometrial cancer.

955 PUBLICATION

Efficacy and safety of combined radiotherapy with irinotecan (CPT-11), interferon (IFN-alpha-2b) and amifostine in patients with locally advanced cervical carcinoma

G. Sarris[1], D. Pectasides[2], N. Kallinoglou[4], G. Vorgias[4], N. Kolliarakis[1], E. Athanasiou[3], K. Beroukas[3], N. Bountouroglou[1], K. Chrysanthou[1], P. Karagiorgis[1]. *[1]Metaxa Hospital, Radiotherapy Department, Pireus, Greece; [2]Attikon Hospital, Oncology Department, Athens, Greece; [3]Ag. Savas cancer Hospital, Radiotherapy Department, Athens, Greece; [4]Metaxa Hospital, Gynecology department, Pireus, Greece*

Introduction: In patients with Locally Advanced Cervical Carcinoma, there has been an increasing interest in combining conventional radiotherapy (RT) with chemo-sensitizing agents such as irinotecan (CPT-11) and interferon a2b (IFN-α-2b). Toxicity is always increased with chemo-radiation, which might affect the treatment gain. Amifostine significantly reduces acute and late chemoradiation induced toxicities. The purpose of this study was to evaluate the efficacy and safety of the combined treatment.
Material and methods: 47 patients with Locally Advanced Cervical Carcinoma St IIb(33), St IIIa(3) and St IIIb (11) entered this study. The median age was 57 years (range 36–78). The patients received standard fractionated RT (1.8 Gy/fraction, 5 days/week) for six consecutive weeks (median dose 54.0 Gy), CPT-11 (30 mg/m* iv on day 1 of each RT week) and IFN-α-2b (3MU/3 TIW sc) during the whole radiation treatment. Additional intracavity treatment with CS137 (20 Gy) was given. Amifostine was administered at a flat dose of 500 mg iv prior to each RT fraction. Patients were evaluated for response six weeks after the completion of at least 4 cycles of biochemo-radiotherapy.
Results: Until now 36 of 47 patients were evaluated for clinical response. 11 patients were non-valuable due to: Refusal to the treatment plan (4 pts), increased toxicity (5 pts), non-completion of the treatment schedule to date (1 pt) and death due to inter-current disease (1 pt). All patients received amifostine as scheduled except 2 pts to whom the administration was interrupted due to hypotension (1 pt) and emesis (1 pt).
Complete response was present in 23 patients (64.0%), partial response in 7 patients (19.4%) and in 6 patients (16.6%) progressive disease was present. Of the 23 patients that have shown clinical complete response, 10 patients underwent hysterosalpingo-oophorectomy (8 pts StIIb, 25 pts St IIIb). 8 patients of them have shown pathological complete response, while 2 patients have shown pathological partial response. Median overall survival was 22 + months.
46 patients were valuable for toxicity grade 3–4. Hematological toxicity (6/46 pts, 13.04%) and intestinal mucositis (6/46 pts 13.04%).
Conclusion: The combination of standard fractionated RT with concurrent administration of CPT-11 and IFN-á2b in patients with Locally Advanced Cervical Carcinoma is highly active and well tolerated treatment. The use of amifostine before RT is well tolerated and is clinically beneficial concerning the chemo-radiation toxicities.

956 PUBLICATION

Radiotherapy in the adjuvant setting of cervical carcinoma: Treatment results and prognostic factors

I.L. Atahan[1], F. Yildiz[1], E. Ozyar[1], B. Pehlivan[1], F. Kose[2], G. Tulunay[2], A. Ayhan[3], K. Yuce[3], N. Guler[4], T. Kucukali[5]. *[1]Hacettepe University, Faculty of Medicine, Department of Radiation Oncology, Ankara, Turkey; [2]SSK Ankara Maternity and Women's Health Teaching Hospital, Department of Gynecologic Oncology, Ankara, Turkey; [3]Hacettepe University, Faculty of Medicine, Department of Obstetrics and Gynecology, Ankara, Turkey; [4]Hacettepe University, Faculty of Medicine, Department of Medical Oncology, Ankara, Turkey; [5]Hacettepe University, Faculty of Medicine, Department of Pathology, Ankara, Turkey*

Background: To evaluate the efficacy of postoperative radiotherapy and to investigate prognostic factors for early stage cervical cancer patients.
Methods: From December 1993 to December 2001, 157 patients with stage I-II cervical cancer treated by surgery and postoperative radiotherapy were included in this study. Indications for postoperative external radiotherapy were based on pathological findings, including lymph node metastasis, positive surgical margins, parametrical involvement, pT2 tumor and presence of any 2 minor risk factors like lymph vascular space involvement, deep stoma invasion and tumor diameter between 2–4 cm. Seventy-two (46%) patients received radiotherapy (RT) alone, whereas 68 (43%) were treated with RT and concomitant chemotherapy (CT) and 17 received neoadjuvant CT. Patients with positive vaginal margins also received 27.5 Gy HDR brachytherapy in 5 fractions.
Results: Median follow-up time was 43 months. The actuarial 5-year overall (OS) disease free (DFS), local recurrence free (LRFS) and distant metastases free (DMFS) survival rates were 72%, 68%, 76% and 87% respectively. Univariate and multivariate analyses revealed that metastatic lymph node (LN) level was the unique significant prognostic factor for all end points and concomitant CT was another significant factor for all end points except DMFS. Number of metastatic pelvic LN for LRFS, RT duration for DFS and LRFS and tumor diameter and type of surgery for DMFS were the other significant prognostic factors that affect survival rates in multivariate analyses. Based on the tumor related prognostic factors, we defined 2 groups as Intermediate risk group (no LN metastasis or with positive 1–3 obturator LN metastases) or high risk group (with positive common iliac LN metastases or more than 3 positive LN metastases). Significant differences were found between these risk groups in terms of OS, DFS and LRFS. Concomitant chemotherapy produced significantly better survival rates in intermediate risk group, whereas no significant benefit could be found in high risk group.
Conclusion: Our results indicate that level and number of metastatic LN's are the most important prognostic factors determining the survival rates and patients with upper lymphatic involvement or more than 3 metastatic LN, it seems concomitant CT is not adequate for patients with upper lymph node involvement or more than 3 metastatic LN.

957 PUBLICATION

Cell proliferative activity in endometrial cancer: 5-year follow-up

V. Nechushkina[1], V. Kuznetsov[1], V. Bogatyrev[2], N. Lazareva[1], K. Morhov[1]. *[1]N. N. Blokhin Russian Cancer Research Center, Department of Gynecology, Moscow, Russian Federation; [2]N. N. Blokhin Russian Cancer Research Center, Laboratory of Clinical Cytology, Moscow, Russian Federation*

Purpose: The purpose of the study was to research flow cytometry characteristics in endometrial cancer.
Methods: Flow cytometry characteristics (EPICS-XL, Coulter, USA): tumor cell ploidy, cells quantity in G0/G1, S and G2+M, iDNA, aneuploid cells quantity, and proliferative index (IP) were studied in 102 patients with endometrial cancer I-IV stages (FIGO) (mean age 59.7). Median follow-up was 62 months.
Results: Stage I endometrial cancer was diagnosed in 82 (80.4%) patients, stage II – in 8 (7.8%), stage III – in 11 (10.8%), and stage IV – in 1 (1.0%). Sixty-eight patients (66.7%) had endometrioid adenocarcinoma, 23 (22.5%) – adenocarcinoma with squamous differentiation. Sixty-seven patients (64.7%) had aneuploid tumors. Most patients with aneuploid tumors had iDNA = 1.1 – 1.76. Mean G0/G1 content was 81.7$\pm$0.8%, S – 9.6$\pm$0,5%, G2+M – 8.7$\pm$0.7%, IP 18.3$\pm$0.8%. Aneuploid endometrial cancer was diagnosed significantly more often in patients older than 70 years, in advanced cases, grade 2–3 tumors, tumors with deep (>1/2) myometrial invasion, cervical and intraperitoneal involvement, adnexal and lymph node metastases, and lymph-vascular space invasion ($p < 0.05$). There was positive correlation between mean G0/G1, S, G2+M content

and IP with FIGO stage, histology, grade, age, myometrial invasion, cervical and adnexal involvement, metastases to pelvic and para-aortic lymph nodes, positive peritoneal cytology, tumor size, lymph-vascular space invasion. Overall 5-year survival was 73.4±4.7%, 5-year disease-specific survival – 80.0±4.4%, 5-year relapse-free survival– 76.7±4.6%. Aneuploidy, iDNA>1.5, G0/G1 < 80%, S >6%, G2+M > 10%, IP > 25% significantly decreased 5-year disease-specific and relapse-free survival. Five-year disease-specific survival by ploidy was 96.6±3.4% (in diploid tumors) and 70.8±6.2% (in aneuploid tumors); by iDNA – 74.6±12.8% (iDNA < 1.0), 96.6±3.4% (iDNA = 1.0), 84.5±6.5% (iDNA = 1.0–1.5), and 13.5±12.1% (iDNA > 1.5). Five-year disease-specific survival by G0/G1 content was 53.3±10.6% (G0/G1 <80%), 89.8±4.3% (G0/G1 = 80–90%), and 91.7±7.8% (G0/G1 >90%); by S content – 94.4±5.4% (S6%) and 75.5±5.4% (S >6%); by G2+M content – 87.8±4.3% (G2+M10%) and 63.7±9.3% (G2+M>10%); by IP – 93.0±3.9% (IP < 18%), 79.8±8.1% (IP = 18–25%), and 48.2±12.4% (IP > 25%).
Conclusion: The most significant independent factors influencing prognosis for disease progression were iDNA, grade, IP, histologic type, myometrial invasion (in descending order).

958 PUBLICATION

Docetaxel (D) and oxaliplatine (DOCELOX) in advanced ovarian cancer (AOC): results of a phase I-II: a GERCOR study

C. Tournigand[1], A. Plantade[1], E. Carola[2], F. Maindrault-Goebel[1], M. Benamoun[3], M. Garcia[1], H. Gervais[1], F. Selle[4], C. Louvet[1], A. De Gramont[1]. *[1]Hôpital Saint Antoine, Service d'Oncologie Médicale, Paris Cedex 12, France; [2]Centre Hospitalier de Senlis, Oncologie, Senlis, France; [3]Hopital de Montfermeil, Oncologie, Montfermeil, France; [4]Hopital Tenon, Oncologie, Paris, France*

Background: docetaxel and oxaliplatin are both active drugs in AOC (Vasey et al. J Natl Cancer Inst. 2004 and Misset et al. Ann Oncol. 2001 (A phase I-II study was initiated to evaluate the tolerance and activity of the combination of oxaliplatin and D.
Material and methods: Patients (pts) with a stage III or IV epithelial OC were included. Pts were either chemonaive (1st line, L1) or relapsing >6 mts after the last platin administration (2nd line, L2 platinum sensitive). The 1st cycle was administered at the following doses: oxali 130 mg/m2 d1 and docetaxel 75 mg/m2 d1 (level 0). The D dose was increased to 85 mg/m^2 for the following cycles, if no grade 3–4 toxicity (level 1). Cycles were repeated every 21 days. 6 cycles were planned. Lenograstim was administrered as secondary prophylaxis.
Results: 32 pts were included (from 2/03 and 1/05). 26 pts were treated in 1st line and 6 in 2nd line. In 1st line, 22 pts had a stage III and 4 a stage IV. In 2nd line, the 6 pts had a stage III, and they previously received a paclitaxel/platinum based chemo as 1st line, with a median progression-free interval of 13 mts (6–32mts). 21 pts (66%) received 6 cycles. 94 cy were delivered at level 0 (32 pts) and 65 at level 1 (20 pts). Grade 3–4 tox by pt at level 0 were neutropenia (8pts, 25%) including 3 febrile neutropenia (FN), anemia (2pts, 6%), diarrhea (4 pts, 12%) and thrombocytopenia (1pt, 3%). Grade 3–4 toxicity by cycle at level 0 were neutropenia (10 cy, 11%), anemia (2 cy, 2%), diarrhea (5 cy, 5%) and thrombocytopenia (1 cy, 1%). Grade 3–4 tox by pt at level 1 were neutropenia (9pts, 45%) including 1 FN, thrombocytopenia (1 pt, 5%), N/V (1 pt, 5%), neuropathy (2 pt, 10%). Grade 3–4 toxicity by cycle at level 1 were neutropenia (9 cy, 14%), thrombocytopenia (1 cy, 1%), N/V (1 cy, 1%). Overall, 75% pts had gr 2 alopecia. Only 2 pts had a gr 3 neuropathy. Evaluation after 3 cy (n = 32): in L1, CR 6, PR10, SD 7, PD 1, ND 2. In L2, CR3, PR1, SD1, PD1. After 6 cy (n = 21): in L1 CR10, PR4, SD3, PD1. In L2, CR2, PR1.
Conclusion: The DOCELOX regimen is active and well tolerated in platinum sensitive AOC patients. The low hematological and neurological toxicity could result in a better therapeutic ratio than the classical carboplatin/paclitaxel combination.

959 PUBLICATION

Evaluation of gefinitib in combination with tamoxifen in ovarian cancer patients refractory to platinum-taxane chemotherapy – results of a phase II study (Ovar 2.6) of the AGO

J. Huober[1], U. Wagner[2], A. duBois[3], J. Pfisterer[4], S. Loibl[5], H.J. Lück[6], U. Camara[7], J. Sehouli[8], M. Gropp[9]. *[1]University of Tuebingen, Gynecology and Obstetrics, Tuebingen, Germany; [2]University of Marburg, Gynecology and Gynecologic Oncology, Marburg, Germany; [3]Dr. Horst Schmidt Kliniken, Klinik für Gynäkologie, Wiesbaden, Germany; [4]University of Schleswig-Holstein Campus Kiel, Gynecology and Obstetrics, Kiel, Germany; [5]University of Frankfurt, Gynecology and Obstetrics, Frankfurt, Germany; [6]Medizinische Hochschule Hannover, Gynecology, Hannover, Germany; [7]University of Jena, Gynecology and Obstetrics, Jena, Germany; [8]Humboldt Universität, Charite, Gynecology and Obstetrics, Berlin, Germany; [9]Evangelisches Krankenhaus, Frauenklinik, Düsseldorf, Germany*

Background: Ovarian cancer patients refractory to platinum-taxane chemotherapy have a poor prognosis. In preclinical studies the epidermal growth factor receptor tyrosine kinase inhibitor gefinitib (Iressa) has shown the potential to inhibit tamoxifen resistance. In phase I/ II studies both agents showed clinical activity in ovarian cancer patients.
Patients and methods: To evaluate safety and activity of the combination of tamoxifen/gefinitib this phase II study was started. From 6/02 to 2/03 56 pts. who relapsed during or within 6 months after platinum-taxane based therapy received tamoxifen 2×20 mg/day and gefinitib 2×250 mg/day orally until progression or until unacceptable toxicity.
Results: 15 pts. had only 1 preceeding treatment with a platinum/taxane regimen, and 41 pts. had been treated at least with 2 regimens (range 2->5). The median age was 57 years (37–80 yrs). The most frequent drug related adverse events (AE) were diarrhea in 57.2% (grade 1/2 42.9%, grade 3/4 14.3%) and acne like skin rash in 39.3% (33.9% grade 1/2, 5.4% grade 3/4) of pts. Gefinitib dose reductions to 250 mg/day were necessary in 10 pts. (14.9%). Due to AE 6 pts. (10.7%) discontinued treatment. Efficacy results showed that there were no complete or partial responses, however 16 pts. achieved stable disease. A progression was seen in 33 pts.and in 7 pts. response was not evaluable. The median time to progression was 58 days (95%CI: 55–70 days), median survival time was 253 days (95%CI 137–355 days) and the median time of treatment was 58 days (7–217 days). After 6 months 59.5% of pts. were alive.
Conclusions: The combination of gefinitib and tamoxifen could be safely administered and showed acceptable toxicicty. In this combination the addition of tamoxifen did not increase the known side effects or induced additional side effects. However response rates were low and suggest that the combination of tamoxifen and gefinitib has only modest clinical activity in ovarian cancer.

960 PUBLICATION

Pathological response of cervix carcinoma to preoperative external irradiation and high dose rate brachytherapy

P. Novaes[1], A. Jacinto[1], M. Castilho[1], A. Pellizzon[1], R. Ferrigno[1], R. Fogarolli[1], M. Maia[1], J. Salvajoli[1], P. Novik[2], F. Coelho[2]. *[1]Hospital do Cancer AC Camargo, Radiation Therapy, Sao Paulo, Brazil; [2]Hospital do Cancer AC Camargo, Gynecology, Sao Paulo, Brazil*

Purpose: To evaluate the pathologic response of invasive cervical carcinoma – stages IIa and early IIb – to external beam irradiation to the pelvis and intracavitary high dose rate brachytherapy.
Material and Method: This is a retrospective analysis of 69 patients with histopathologic proven diagnosis of cervical carcinoma treated between January 1993 to August 1999. Median age was 45 (range 22–72) years and squamous cell carcinoma was the prevalent histologic type (81%). According the FIGO staging, 1 patient was IIa and 68 patients were early IIb (less than one third of compromised parametrium). All patients received pelvic radiotherapy with 4 or 6 MeV linear accelerator – 45 Gy (25 fractions of 1.8 Gy – five days/week) – combined to intracavitary high dose rate brachytherapy (HDRB) – 12 Gy (two insertions of 6 Gy – point A). Median total irradiation time was 42 days (range 35–108). After radiation therapy, the patients were submitted to radical hysterectomy+bilateral salpingooforectomy and selective lymphadenectomy – Piver II type, after a mean time of 40 days (range 15–136). All pathological specimens were analysed according the presence of residual tumor on the cervix, paracervical tissues and pelvic lymphnodes, and we defined pathologic response as total absence of residual disease.
Results: In 26 (38%) patients there were no residual tumor on pathological specimen (complete remission). There were 68 (100%) parametrial pathologic responders, 29 (42%) complete cervical responders. Three patients were not submitted to lymphadenectomy during surgery Pelvic