clinical effectiveness of neoadjuvant CT in a portuguese comprehensive cancer centre.
Material and Methods: We retrospectively evaluated pts with urothelial carcinoma of the bladder treated with neoadjuvant CT between January 1996 and December 2005 at Instituto Português de Oncologia do Porto. The study excluded pts with T1 tumours. Descriptive analysis of clinical, pathological and treatment characteristics was performed. Study endpoints were overall survival (OS), disease free survival (DFS) and clinical response. Kaplan-Meier method was used to estimate survival outcome and differences were compared with the Log Rank test.
Results: Seventy two pts were identified, 81% male, with a median age of 69 years (range 41−80). All pts presented with ECOG performance status (PS) 0−1. Disease extension at diagnosis was: T2N0/X in 46%, T3N0/X in 37%, T4N0/X in 5% and anyTN1−3 in 12%. Histological grade 3−4 was found in 76% tumours. Twenty seven pts (38%) received cisplatin-methotrexate, 26 pts (36%) M-VAC (methotrexate-vinblastine-doxorubicin-cisplatin) and 19 pts (26%) platinum-gemcitabine. Objective clinical response before local treatment was 25% (18% complete responses and 17% partial responses). Twenty one pts (29%) had stable disease and disease progression was observed in 8 pts (11%). No significant differences in clinical response were found between CT regimes. Radical or partial cystectomy was the local treatment of choice in 44 pts (61%) and radical radiotherapy in 11 pts (15%). With a median follow-up of 28 months, 60% pts had disease recurrence or progression and 55% died of bladder cancer. Median DFS was 24 months (95% CI 11.7−36.3) and median OS was 29 months (95% CI 14.7−43.3) with estimated 5-year survival of 39%. ECOG PS 1 was associated with worse OS (p = 0.003). Pts treated with M-VAC had longer OS and DFS although not statistically significant. The choice of local treatment had no impact on survival.
Conclusions: Neoadjuvant platinum-based CT for muscle invasive urothelial carcinoma of the bladder is feasible in the clinic. Our results are consistent with those of the largest meta-analysis published to date.

7179 POSTER

Extragonadal germ cell tumours – results from a single centre

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Background: Primary extragonadal germ cell tumours (EGTs) are an uncommon malignancy accounting for 2−4% of all germ cell neoplasms in adult males. Their prognosis is worse than that for testicular germ cell tumours because of their relative chemoresistance and frequent presentation with widely disseminated metastases.
Patients and Methods: We identified 20 male patients (pts) with unequivocal diagnosis of mediastinal or retroperitoneal EGT who were treated at the Thomayer University Hospital between 1994 and 2008. The median age was 37 years (range: 19−52 years). Information on baseline characteristics, treatments, and outcome were obtained retrospectively from medical records. Radical surgical removal of the tumour was initially attempted in 4/20 patients, and was unsuccessful in all cases. All 20 pts received first-line platinum-based chemotherapy – 19/20 with bleomycin/etoposide/cisplatin (BEP) and 1/20 with cisplatin/vinblastin/etoposide (PVB). Four of 20 pts received additional chemotherapy regimens(s) as a part of the first-line treatment. Fifteen of 20 patients were treated with second-line chemotherapy including 4/20 pts who received high-dose chemotherapy.
Results: Only 2/20 pts (10%) achieved complete response (CR) after the first-line chemotherapy. Five of 20 pts (25%) had marker (M)-negative partial response (PR), 11 pts (55%) M-positive PR, and 2 pts died of disease progression during the first-line chemotherapy. Median overall survival (OS) of our pts is 24.8 months (4.5−98.1 months), with 6/20 (30%) patients surviving long-term, all off-treatment and disease-free. Of the analysed variables (age, constitutional symptoms, mediastinal versus retroperitoneal primary, seminoma versus nonseminoma, LDH elevation, S stage, metastatic site) only histology of seminoma was associated with favourable prognosis (p = 0.036). Significantly longer OS was achieved by patients who had negative positron emission tomography (PET) findings (median OS 50.7 versus 18.5 months, p = 0.004) and who had tumour marker normalisation (median OS 36.0 versus 13.3 months, p = 0.005) after therapy.
Conclusions: Widespread metastatic disease is commonly present in EGT patients at diagnosis. Complete responses are seldom achieved by first-line chemotherapy but long-term survival is achievable after combined-modality treatment. Negative PET findings after chemotherapy predict better OS although relapses did occur even after a negative PET study.

7180 POSTER

Six cases of testicular cancer associated with sarcoidosis: a clinical challenge

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Background: Mediastinal lymph nodes or intrapulmonary lesions are common findings in patients (pts) with metastatic testicular cancer and in pts with sarcoidosis. Under rare circumstances both diseases are diagnosed in the same pt, which can lead to diagnostic uncertainties, inadequate staging or even overtreatment of pts.
Material and Methods: We reviewed a retrospective cohort of 6 patients with both testicular cancer and sarcoidosis to assess the diagnostic and therapeutic challenges of this rare combination.
Results: The median age at diagnosis of germ cell tumour was 28 yrs (range 27−38). All pts had gonadal primaries, including 3 seminomas and 3 non-seminomas. All pts underwent inguinal orchiectomy, staging with CT chest/abdomen and assessment of AFP, βHCG and LDH; two had increased markers at baseline. The initial stage of disease according to the AJCC classification was IA (2), IIA (2), IIC (1) and IIIC (1). 4 pts received cisplatin-based chemotherapy (BEP, EP, VIP) and one single-agent carboplatin. Two pts had mediastinal adenopathy at the initial diagnosis, four developed nodeal disease during follow-up. Due to diagnostic uncertainties all underwent a mediastinoscopy or biopsy after a median interval of 8 months (range 4−20) from the diagnosis of testicular cancer. All pts had noncaseating sarcoid-like granulomas. The diagnosis of systemic sarcoidosis was confirmed in 3 pts by other investigations (BAL lymphocytosis and ophthalmologic evaluations). Only one pt required specific corticosteroid therapy. All others had spontaneous regression of sarcoidosis after a median of 10 months (range 4−20). Two pts were potentially overtreated for their testicular cancer (one with chemotherapy and one had a wedge resection of the lung with mediastinal, hilar and intrapulmonary lymphadenectomy) due to the finding of mediastinal adenopathy. All patients are alive without evidence of active cancer or sarcoidosis after a median interval since diagnosis of testicular cancer of 44 months (range 15−79) and 26 months (range 8−69) after diagnosis of sarcoidosis.
Conclusions: Sarcoidosis and testicular cancer can occur in the same pt, without a known pathophysiological relationship, either in a simultaneous or metachronous fashion. Mediastinal adenopathy can be found in both entities and mediastinoscopy is useful to clarify the differential diagnosis. Not all mediastinal masses in patients with testicular cancer are germ cell tumour metastasis and sarcoidosis or sarcoid-like reactions should be part of the differential diagnosis.

7181 POSTER

Socioeconomic profile of patients with stage I testicular seminoma

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Background: The significant increase in testicular cancer over the last few decades calls for an investigation of the influence of socioeconomic status on its aetiology. The aim of this study was to establish living conditions, family cancer history, education, and social behaviour in stage I testicular seminoma patients (TSPs).
Material and Methods: This hospital-based study included 100 TSPs diagnosed between 2003 and 2009 and 300 healthy men matched by age. Using a detailed questionnaire, the subjects were interviewed about the family history of cancer, occupational and living environment, diet, and drug intake. One-way ANOVA was used for statistical analysis of results.
Results: TSPs belonged to middle or low-income groups (84%). Alcohol, smoking, and vegetable intake did not significantly differ between controls and TSPs (OR = 0.95, CI 0.51−1.77; OR = 0.3, CI 0.22−0.56; OR = 1.02, CI 0.55−1.8). TSPs had significantly more ex-smokers than controls (p < 0.05). Half the TSPs were occupationally exposed to exhaust fumes, paint thinners, and heavy metals. TSPs showed a significantly higher intake of read meat (OR = 2.25, CI 1.2−4.2), use of pesticides (OR = 6.19, CI 2.4−15.7), and family history of cancer (OR = 4.4, CI 2.37−8.23) than controls.
Conclusion: Occupational exposure to exhaust fumes, paint thinners, and heavy metals, family cancer history, use of pesticides at home, and read meat intake correlate with testicular cancer. Socioeconomic status and its multidimensional nature are associated with the incidence of the diseases due to specific physical, biological and chemical stressors.

Further investigation is needed to establish socioeconomic strata at a higher risk of testicular cancer and introduce proper preventive measures.

7182 POSTER

Risk factors for bleomycin induced pulmonary toxicity in germ cell tumor patients

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Background: Bleomycin is one of the main drugs used as induction chemotherapy in germ cell tumor patients. Pulmonary toxicity is a fatal side effect of this drug. The aim of this study was to evaluate the risk factors for bleomycin induced pulmonary toxicity (BPT) in germ cell tumor patients.
Material and Methods: We retrospectively reviewed the medical records of 83 male germ cell tumor patients admitted at our hospital from March 2006 to September 2008. All patients were treated with bleomycin, etoposide and cisplatin chemotherapy with three doses of 30,000 IU of bleomycin per cycle for two to four cycles. All cases of lung toxicity ranging from fibrosis changes, consistent with BPT, noted on chest X ray or thoracic computed tomography scan, to dyspnea requiring treatment with steroids were identified. Risk factors predicting BPT were analyzed using P value generated from univariate and multivariate logistic regression analysis, 95% confidence intervals (CI) were also calculated. P value of less than 0.05 was considered statistically significant.
Results: The mean age of study population was 31 years (range 18−50 years). Fifty eight (69.9%) patients had non seminoma. Forty six (55.4%) patients were stage III and 7 (8.4%) patients had primary extragonadal germ cell tumors. Mean cumulative bleomycin dose was 273,000 IU. Fifteen (18.1%) patients developed BPT. In univariate analysis of BPT, glomerular filtration rate (GFR) <80 ml/min before chemotherapy ($p = 0.01$; 95% CI 1.36−14.23), age >40 years at time of bleomycin administration ($p = 0.03$; 95% CI 0.06−0.86), granulocyte colony stimulating factor (GCSF) use with chemotherapy ($p = 0.01$; 95% CI 1.35−21.39), presence of lung metastasis at presentation ($p = 0.004$; 95% CI 1.88−28.55) and primary extragonadal germ cell tumors ($p = 0.01$;95% CI 1.54−40.1) were significantly associated with an increased risk of bleomycin induced lung toxicity. On multivariate analysis, GCSF use with chemotherapy ($p = 0.01$;95% CI 1.83−178.6), presence of lung metastasis at presentation ($p = 0.006$;95% CI 2.11−91.42) and primary extragonadal germ cell tumors ($p = 0.01$;95% CI 2.16−722.4) were identified as independent risk factors for bleomycin induced pulmonary toxicity.
Conclusion: Primary extragonadal germ cell tumors, lung metastasis at presentation and GCSF use with chemotherapy are independent risk factors for BPT.

7183 POSTER

Outcomes in metastatic (met) germ cell tumours (GCT): 5-year experience from a single institution

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Background: Adherence to international guidelines is important in treating met GCT. We followed the European Consensus guidelines (Ann Oncol 2004) for most patients (pats) since their publication. Poor-risk pats or those with an incomplete response (IR) to chemotherapy (chemo) were discussed with the RMH[3]. This is the first report from Cyprus, on a series of consecutive pats treated with first-line chemo over the last 5 years (yrs).
Methods: All pats had met GCT. Standard BEP (Bleomycin, Etoposide, Cisplatin) chemo was given over 3 or 5 days (d). Good-risk pats received 3d BEP×3, intermediate/poor-risk pats 5d BEP×4. Where B was contra-indicated we used EP×4. From 12/2005 we adopted CBOP/BEP (C, carboplatin; O, vincristine) for pats with bulky poor-risk disease. All retroperitoneal lymph node dissections were carried out in the UK. Post-chemo follow-up (FU) was every 2/3/6 months in yrs 1/2−3/4−5 respectively.
Results: We treated 37 pats from 1/2004−4/2009. Their characteristics were: median age 30 (range 17−57); primary, testis n = 36, mediastinum n = 2; non-seminoma n = 30, seminoma n = 8 (bilateral testis primaries 1 patient); hCG, AFP, LDH raised in n = 18/21/24 respectively; Median values (range) were 71 (6−249,000), 81 (8−35,350), 1.6x upper limit of normal (1.0−6.9). IGCCCG prognostic groups: Good n = 24 (65%), intermediate (interm) n = 7 (19%), poor n = 6 (16%). Median chemo cycles 3 (range 2−11, total 166). Post-chemo surgery was performed in 7 pats (10 resections). After a median FU of 25.8 months (range 0.5−59.3) only 2 pats died of GCT. 3-year OS was 92% (all pats), 100% (good-risk) and 79% (interm/poor-risk). The overall 3-year failure-free survival (FFS) in 34 evaluable pats was 87% (65% in interm/poor-risk). The table below summarizes response outcomes and survival status.

Response	n = 37	%
CR	27	73
CR chemo	22	
chemo+Sx	4	
chemo+RT	1	
IR	7	19
Not evaluable	3*	8
Survival	n = 37	%
Alive+Disease-free	24	65
Alive with disease	7*	19
Status unknown	4	11
Died of GCT	2	5

*treatment ongoing in 3.

Conclusion: The 3-year OS of 92% illustrates how use of international guidelines can lead to satisfactory outcomes in small isolated treatment centres.

7184 POSTER

Docetaxel activity in second line treatment for urothelial carcinoma: a retrospective analysis

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Background: There is not standard treatment for urothelial carcinoma after relapse or progression to first line treatment with platinum based chemotherapy. Docetaxel has emerged as an option in second line for patients with an optimal performance status based on its activity as single agent or in combination with platinum in first line treatment. In this setting, it has been reported a response rates of 31−60%. Very few trials has studied its activity as single agent after progression to standard chemotherapy regimen. To asses the activity of docetaxel in urothelial carcinoma as single agent in second line treatment we retrospectively review the patients treated in our hospital.
Patients and Methods: We retrospectively review our patients with advanced or metastatic urothelial carcinoma of the bladder or of the superior urinary tract who were treated with docetaxel in second line. Variables analysed were: Age, Sex, ECOG performance status (PS), site of primary (bladder vs. superior urinary tract), number of metastatic sites, docetaxel dose, number of cycles, response by RECIST criteria, time to progression (TTP) and survival (OS).
Results: Between April of 2005 and October of 2008 27 patients were treated with docetaxel as second line treatment. In 4 cases we were unable to collected completed data, so those patients were excluded for the present analyses. Of the 23 patients analysed, median age was 73 (range 59−85), 19 were male and 4 female, all of then had a PS of 0−2, primary tumour was located in the bladder in 20 cases, in the urether in 2 and in renal pelvis in 1 case. Median number of metastatic sites were two. Docetaxel was administred at 100 mg/m^2/21d but in two cases radiotherapy was administred concurrently and docetaxel dose was changed to 40 mg/m^2/7d during radiotherapy treatment. Median number of cycles administered were 3 (range 1−4). Response rate could be evaluated in 16 cases and no complete or partial response was observed. Stable disease was reported in 3 patients and progressive diseases in the other patients. Seven patients were not evaluable because of rapid clinical deterioration, probably related to progressive disease. Median time to progression was 55 days and median OS was 74 days.
Conclusions: In this retrospective analysis docetaxel has demonstrated little activity in this subset of patients. There is an emergent need to identify new drugs for patients who have progressed to platinum-based chemotherapy.

7185 POSTER

Neoadjuvant chemotherapy for invasive bladder cancer – single centre study on tolerance and response

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Background: The 5% improvement in absolute overall survival (OS) at 5 years that has been shown with neoadjuvant chemotherapy in muscle