fatigue score and low educational level were significantly associated with hypogonadism in univariate analyses.
Multivariate analysis showed that TCSs had more than doubled risk for hypogonadism compared to LSs (OR=2.29, 95% CI: 1.56–3.38). With low gonadotoxic group as reference, treatment with medium gonadotoxicity showed OR=2.55 (95% CI: 1.97–3.31), and treatment with highly gonadotoxic treatment OR=23.78 (95% CI: 12.72–44.48). In addition, increasing age at survey ($p < 0.001$) and increasing total fatigue score ($p = 0.04$) were significantly associated with hypogonadism in multivariate analyses.
Conclusions: Approximately 50% of both TCSs and LSs included in this study were hypogonadal at a mean of 11.7 years after primary treatment emphasizing the importance of awareness to this late effect after treatment. The TCSs had more than doubled risk for hypogonadism compared to LSs, and one might speculate if this is related to impaired testicular function at diagnosis and/or reduced testicular volume after orchiectomy.

7172 POSTER

The Prognosis of Patients With Non-Muscle Invasive Bladder Tumour Less Than 40 Years

T. Kang[1], S. Na[1], E. Hwang[1], D. Kwon[1], S. Ryu[1], S. Jung[1]. [1]*Chonnam National University Medical School, Urology, Gwangju, Korea*

Background: Bladder tumour tend to increase morbidity, generally peak incidence was in 60−70 generation but, recently gradually increasing morbidity demonstrate in young age. We investigate characteristics and prognosis of patient less than 40 years with non-muscle invasive bladder tumour.
Materials and Methods: We retrospectively analyzed 42 patients (group 1) less than 40 years with bladder tumour, and they were followed up for more than 6 months after transurethral resection of bladder tumour (TUR-BT) under the impression of bladder tumour from October 1998 to February 2010. As controlled group, we analyzed 44 patients (group 2) more than 60 years with bladder tumour, and they were followed up for more than 6months after TUR-BT from January 2009 to December 2009. We investigated pathologic result that confirmed to biopsy after operation and assessed recurrence, progression.
Results: Average age was 33.6 ± 10.3 years in group 1, 71.6 ± 7.4 years in group 2. Group 1 and 2 were not significant different in sexual distribution (30:12 vs 33:11). In stage of group 1, 33 patients were Ta (78.6%), 4 patients were T1 (9.5%), 5 patients were T2 and more (11.9%). In stage of group 2, 23 patients were Ta (52.3%), 16 patients were T1 (36.4%), 5 patients were T2 and more (11.4%). The proportion of muscle invasive type was not different in both group, non-muscle invasive type in group 1 were lower stage than that of group 2 ($p = 0.01$). The differentiation of non-muscle invasive tumour in group 1, low grade was 31 patients (73.8%), in group 2, high grade was 23 patients (52.3%). Relatively low grade was more found in group 1 ($p = 0.013$). The patients of recurrence were 2 patients (4.8%) in group 1, 17 patients (38.6%) in group 2, so recurrence rate was lower in group 1 ($p = 0.001$). When recurrence was found, stage elevation was none in group 1, was 1 patient in group 2.
Conclusions: In young patients less than 40 years, non-muscle invasive bladder tumour happen to equivalent rate comparing that of older patients, but stage, differentiation and recurrence rate was low, so we can expect better prognosis.

Oral Presentations (Mon, 26 Sep, 09:00−11:05)
Gynaecological Cancer

8000 ORAL

Results of the GYNECO 02 Study, a FNCLCC Phase III Trial Comparing Hysterectomy Versus No Hysterectomy in Patients With a (Clinical and Radiological) Complete Response After Chemoradiation Therapy in IB2/II Stage Cervical Cancer

P. Morice[1], A. Rey[2], P. Rouanet[3], P. Romestaing[4], G. Houvenaeghel[5], J.C. Boulanger[6], J. Leveque[7], D. Cowen[8], J. Berille[9], C. Haie-Meder[10]. [1]*Institut Gustave Roussy, Surgery, Villejuif, France;* [2]*Institut Gustave Roussy, Biostatistics, Villejuif, France;* [3]*Centre Val d'Aurelle, Surgery, Montpellier, France;* [4]*Groupe Hospitalier Lyon Sud, Surgery, Lyon, France;* [5]*Institut Paoli Calmette, Surgery, Marseille, France;* [6]*CHU, Gynecology, Amiens, France;* [7]*Centre Eugene Marquis, Gynecology, Rennes, France;* [8]*Centre Hospitalier La Timone, Oncology, Marseille, France;* [9]*FNCLCC, Oncology, Paris, France;* [10]*Insitut Gustave Roussy, Radiation Therapy, Villejuif, France*

Background: Concomitant chemotherapy and radiation (including brachytherapy) (CRT) is considered as the standard treatment for IB2/II stage cervical cancer in many countries but the benefit from the surgery (hysterectomy: HT) following CRT needs to be defined.
Methods: A randomized trial was opened in France in 2003 to evaluate the benefit of HT after CRT. The main inclusion criteria were: 1. stage IB2/II cervical cancer; 2. no extrapelvic disease on conventional imaging; 3. pelvic external radiation therapy (45−50 Gy +/− a parametrial or nodal boost) with concomitant *cisplatin* chemotherapy (40 mg/m^2/week) followed by utero-vaginal brachytherapy (15 Gy); 4. no residual macroscopic disease (clinical and radiological response) 6 to 8 weeks after brachytherapy. The main criteria was the 3 year event-free survival. Patients were randomized between HT (arm A) versus no HT (arm B). Unfortunately, in total 61 patients out of 320 (160/arm) were enrolled (poor accrual) and are described in this study.
Results: Thirty-one and 30 patients were enrolled respectively in arms A and B. Twelve patients relapsed (5 of them died): respectively 8 and 4 in arms A & B. Three-year EFS rates were 72% (SE=9%) and 89% (SE=6%)(NS) in arms A & B respectively. Three-year overall survival rates were 86% (SE=6%) and 97% (SE=3%)(NS) in the A & B arms respectively.
Conclusions: The results of this trial seem to suggest that hysterectomy had no therapeutic impact on patients with a clinical and radiological complete response after CRT (but this conclusion is limited by the lack of power).

8001 ORAL

Clinical and Dosimetric Outcomes for 3D Image Guided Adaptive Pulsed-dose-rate Brachytherapy in Locally Advanced Cervical Cancer

R. Mazeron[1], J. Gilmore[1], I. Dumas[1], S. Abrous-Anane[1], S. Haberer[1], R. Verstraet[1], J. Champoudry[1], C. Chargari[1], P. Morice[2], C. Haie-Meder[1]. [1]*Institut Gustave Roussy, Radiotherapy, Villejuif, France;* [2]*Institut Gustave Roussy, Surgery, Villejuif, France*

Background: Integration of 3D images in brachytherapy planning allows dosimetric optimization and dose escalation in locally advanced cervical cancer patients. The objective was to evaluate the outcomes in a large series of patients, treated with 3D image guided brachtherapy (BT) after external beam radiotherapy (EBRT).
Methods and Materials: On behalf of the retro-EMBRACE study group, patient data was reviewed, for those with curable locally advanced cervical cancer treated with 3D image guided pulsed dose rate (PDR) BT after EBRT from March 2004 to July 2009. Patients lost to follow up or not followed in our institute, for whom follow-up data were not reliable were excluded. Patients received concomitant pelvic or pelvic plus para-aortic chemoradiation (45–50.4 Gy) followed by MRI or CT guided PDR BT (15 Gy to the IR-CTV). Brachytherapy was performed according to GEC-ESTRO guidelines. HR-CTV, IR-CTV, rectum, sigmoid colon and bladder were delineated. Additional nodal or parametrial EBRT boosts were performed when indicated.
Results: 130 patients fulfilled the inclusion criteria. At diagnosis, the estimated median tumour volume was 43 cm^3 (4–269). The stage distribution was: 1B 27%, IIA 6%, IIB 46%, IIIA 3%, IIIB 10%, IVA 3% and IVB 5%. Squamous cell carcinoma was the commonest histological subtype (85%). 38% had nodal involvement. 120 patients received concomitant chemotherapy, weekly cisplatinum when not contra indicated. 18% of the patients received pelvic plus para-aortic EBRT. BT was based on MRI for 114 patients and on CT for the remaining 16. The doses delivered (EBRT + BT, in 2 Gy equivalent) were 66.7 Gy (51.7–86.9, α/β=10) to 90% of the IR-CTV, 77.4 Gy (51.9–104, α/β=10) to 90% of the HR-CTV. The D2cc for the bladder, rectum and sigmoid were 68.6 Gy (51.5−87, α/β=3), 58.8 Gy (46.7−73, α/β=3) and 58.3 Gy (46.5–77.1, α/β=3) respectively. Afterwards, 48 patients proceeded to radical hysterectomy.
After a median follow-up of 27 months (5−79), 32 patients had relapsed. Only 5 local relapses were reported (4 central and 1 lateral), of which only one was isolated. There were 17 nodal failures (8 pelvic and 9 para-aotic) and 22 metastatic relapses. The 2 year OS was 85% and the DFS was 75%. Local control was 96.5% and pelvic control (adding pelvic nodal control to local control) was 90.5%.
65% of the patients had grade 1−2 toxicities and 8.5% grade 3−4, according to the Common Toxicity Criteria 3.0. Regarding the long term grade 3−4 events, 5 of the 7 with bowel toxicity and 2 of the 3 with urinary toxicity had undergone post radiation radical surgery.
Conclusion: This is one of the first large series of patients treated with image guided adaptive PDR brachtherapy after chemoradiation. It provides excellent loco-regional control rates with a low level of late side effects. The rate of distant metastasis as first site of relapse raises the question of more aggressive systemic treatment.