Results: Pts were: 44 females, 40 males, with a median age of 57 years (30−84), and median ECOG 0 (0−3). Abdominal pain, anemia, and GI bleeding were the most common symptoms. Tumours (T) were mainly located on D2 (31%), or D3/D4 (33%), with a median size of 6 cm (1.5−30). All pts had resection of the primary T. Surgical procedures were: local resection (LR) -[segmental duodenectomy (n = 24), wedge local resection (n = 27), local excision (n = 5)], and duodenopancreatectomy (DP, n = 13). Resections were R0/R1 in 69 pts (82%). T characteristics included: KIT+ (n = 74), CD34 + (n = 43), mitoses/50 HPF $\leqslant$ 5 (n = 51), or >5 (n = 20), Miettinen low-risk (n = 24), and high-risk (n = 19), necrosis (n = 25), spindle cell (n = 62), Mutations were documented in 24/28 cases, usually in KIT exon 11 (n = 22). 8 pts received neoadjuvant imatinib (IM) therapy resulting in 4 PR, 3 SD, 1 PD. 12 pts received adjuvant IM therapy. With a median FU of 36 months (4–250), 74 pts (88%) are alive. Twenty-eight (33%) pts relapsed: 5 localized, and 25 metastatic. The 4-year OS and EFS rates were 89.5% and 64.6% respectively. The 6-year OS and EFS rates were 89.5% and 32.4%. Univariate analysis showed that: age and ECOG PS have an impact on OS ($p = 0.003$, $p < 0.001$), necrosis, spindle-cell type, T size, mitoses/50 HPF, and Miettinen risk are predictive of relapse ($p < 0.001$). In multivariate analysis tumour size and mitoses/ 50 HPF only were predictive of relapse ($p < 0.001$).
Conclusions: Pts with completely resected primary duodenal GIST seem to have favourable prognosis. LR rather than DP should be pursued if possible to preserve optimal pancreas function. Neoadjuvant IM may potentially allow more locally advanced GISTs pts to undergo LR.

9414 POSTER

A Retrospective Analysis of Presentation and Outcome in Ewing's Sarcoma − a Single Institute Experience

M. Behera[1], S. Dutta[2], G.K. Rath[1]. [1]*All India Institute of Medical Sciences, Radiation Oncology, New Delhi,* [2]*Post Garduate Institute of Medical Education & Research, Radiation Oncology, Chandigarh, India*

Aims: To analyse the clinical characteristics of patients of Ewing's sarcoma and to evaluate the survival & prognostic factors influencing treatment outcome with multimodality treatment.
Material and Methods: In this retrospective analysis, a total of 81 patients of ewing's sarcoma were studied from January 2003 to March 2010. All the patients were analyzed for presenting features, sites of involvement, treatment recieved and distant metastasis. Kaplan meyer test was applied for survival function. Analysis of failure was done in 39 patients with various risk factors such as age, bulky disease, extaosseous sites and soft tissue involvement.
Results: With median follow up of 30 months, this study showed that with initial modality therapy, the complete response rate was 53.08% and distant metastasis was seen in 38.27% in which the lung was the most common site (54%). The median survival as showed in the study was 24.5 months. This study highlighted that patients having central lesions or bulky disease (>100 cc) or extraosseous presentation or soft tissue invovement have poor disease free survival as compared to the contrary.
Conclusion: Most significant prognostic factors affecting disease outcome in Ewing's sarcoma are the bulk of disease and site of involvement at presentation. Extraosseous Ewing's sarcoma adversely affects disease free survival and aggressive treatment should be considered in these patients for better disease control and survival.

9415 POSTER

Sporadic Desmoid Tumours of the Chest; Long Term Follow-up of Twenty-eight Multimodally Treated Patients

Z. Mátrai[1], L. Tóth[1], Z. Szentirmay[2], F. Rényi-Vámos[3], W. Klepetko[4], P. Vadász[5], I. Kenessey[6], A. Sávolt[7], A. Bartal[8], M. Kásler[9]. [1]*National Institute of Oncology, Department of General and Thoracic Surgery, Budapest,* [2]*National Institute of Oncology, Department of Surgical and Molecular Oncopathology, Budapest,* [3]*National Institute of Oncology, Department of General and Thoracic Surgery, Budapest, Hungary;* [4]*Vienna Medical University, Department of Thoracic Surgery, Vienna, Austria;* [5]*Koranyi National Institute for Pulmonology, Thoracic Surgical Clinic, Budapest,* [6]*Semmelweis University, 2nd Department of Pathology, Budapest,* [7]*National Institute of Oncology, Department of General and Thoracic Surgery, Budapest,* [8]*National Institute of Oncology, Pharmacy Department, Budapest,* [9]*National Institute of Oncology, Department of Head and Neck Laser and Reconstructive Plastic Surgery, Budapest, Hungary*

Background: Desmoids of the chest are extreme rare borderline tumours. Radical surgical resection is considered to be the primary treatment. Achieving negative margins is often a challenge. Cases with positive surgical margins are associated with high risk of local recurrence.
Patients and Methods: A retrospective multicenter review was undertaken of twenty-eight patients who underwent surgery for sporadically appearing desmoids of the chest between 1988 and 2008. Clinico-pathological data were investigated in detail. Authors have statistically analyzed the relationships between gender, age, tumour size, radicality of the first surgery, impact of the pharmacologic treatment, estrogen receptor positivity, and the development of local recurrences after a median follow-up period of 104 months.
Results: Primary surgery was radical in fourteen patients (50%). Mean pathologic diameter was 72.14 mm. Wide surgical excision was performed in twenty-seven primary cases, out of which ten cases (37%) were full-, and seventeen cases (63%) partial-thickness chest wall resections. Synthetic mesh stabilisation was used in nine cases and soft tissue coverage in six patients. Morbidity rate was 25%. Recurrencies were found in 63% of the cases, with a mean time of 30.5 months to first recurrencies. Our investigation confirmed that microscopically free surgical margin of the first tumour resection significantly affected local tumour control.
Conclusions: Because the radicality of the first surgical resection is of essential importance for long time local control of chest desmoids, accurate preoperative diagnostics and well planned aggressive surgical resection of the primary tumour is recommended. Due to the low incidence of desmoids, multicentric randomized investigations would be mandatory to establish evidence based protocol for desmoid tumours.

9416 POSTER

Limb-sparing Surgery and Radiotherapy for Soft Tissue Sarcomas of the Extremities

J.M. Felderhof[1], C.L. Creutzberg[1], H. Putter[2], R.A. Nout[1], J.V.M.G. Bovee[3], P.D.S. Dijkstra[4], H.H. Hartgrink[5], C.A.M. Marijnen[1]. [1]*Leiden University Medical Center, Radiation Oncology, Leiden,* [2]*Leiden University Medical Center, Medical Statistics, Leiden,* [3]*Leiden University Medical Center, Pathology, Leiden,* [4]*Leiden University Medical Center, Orthopaedic Surgery, Leiden,* [5]*Leiden University Medical Center, Surgical Oncology, Leiden, The Netherlands*

Background: Standard treatment for soft tissue sarcomas (STS) of the extremities is limb-sparing surgery followed by adjuvant radiotherapy (RT) in case of close surgical margins and/or adverse prognostic factors. Purpose was to evaluate local control, survival, RT related side effects and functional outcomes after limb-sparing surgery followed by RT for STS.
Material and Methods: All patients treated for STS in the Leiden University Medical Center between 1995 and 2010 were included; 338 patients were treated, of whom 121 had STS of an extremity, treated with limb-sparing surgery and RT with curative intent. Radiotherapy was delivered preoperative in one patient (50 Gy), or postoperative: 114 patients 60 Gy, 6 patients 66 Gy. Few patients (11%) received chemotherapy. Data on survival and recurrences were retrieved from the hospital oncological database, whereas data on early and late toxicity were collected retrospectively from patients notes. Statistical analysis was done using long-rank tests, Kaplan–Meier method and Cox regression analysis.
Results: Median follow-up was 93 months. Actuarial local recurrence rates at 5 and 10 years were 9.1% and 11.7%. The only significant factor for local failure was high tumour grade. Distant metastases rates at 5 and 10 years were 31% and 36.8%. Five- and 10-year overall survival rates were 69% and 54%, and disease-free survival rates 59.5% and 43%, respectively. Acute radiation related toxicities occurred in 91% of the patients: 37% grade 1, 35% grade 2, 17% grade 3 and 2% grade 4. Late toxicity was reported in 72%: 51% grade 1, 19% grade 2 and 2.5% grade 3. Conservation of function was good, with 23% having some degree of decreased range of joint motion, which was mostly mild: 19% grade 1, 3.3% grade 2 and 1% grade 3. Mild limb edema was recorded in 26%.
Conclusions: Limb-sparing surgery with adjuvant radiotherapy for patients with STS provides excellent local control and high survival rates with acceptable toxicity and good functional outcome.

9417 POSTER

Reirradiation and Hyperthermia for Radiation-associated Sarcoma

M.A.A. de Jong[1], S. Oldenborg[1], S.B. Oei[2], V. Griesdoorn[2], M.W. Kolff[1], C.C.E. Koning[1], G. van Tienhoven[1]. [1]*Academisch Medisch Centrum, Radiation Oncology and Hyperthermia, Amsterdam,* [2]*Institute Verbeeten, Radiation Oncology and Hyperthermia, Tilburg, The Netherlands*

Background: Radiation-Associated Sarcoma (RAS) is a rare entity with a poor prognosis. As a result of a rising prevalence of breast cancer and a higher percentage of patients treated with irradiation as part of multidisciplinary treatment, an increase of incidence of RAS of the breast and chest wall is to be expected. We evaluated the role of reirradiation and hyperthermia in the treatment of RAS in the thoracic region.
Material and Methods: Between 1979 and 2009, 16 patients with RAS in the thoracic region were treated in the Academic Medical Centre and the Institute Verbeeten with reirradiation and hyperthermia. In 13 cases this treatment was given for irresectable disease and three times after resection as adjuvant treatment.