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Background. Juvenile nasopharyngeal angiofibroma (JNA) is a rare, highly vascular tumour, which is primarily seen in male adolescents and is characterised by aggressive local growth.

Methods. During 1990–2009, 40 male patients (aged 9–22 years) with extensive JNA were treated with definitive radiotherapy. The tumours were staged according to JNA classification (1987) based on clinicoradiological extensions. Radiologically, on computed tomography (CT) scan, all patients had extensive disease with tumours in paranasal sinus or orbits(s) or the intracranial compartment. Because of extensive disease, all patients were treated with a median radiotherapy dose of 50 Gy in 25 fractions over 5 weeks on a 6 MV linear accelerator or tele-cobalt unit.

Findings. Excellent symptomatic relief was seen during treatment in all patients, but radiological regression on follow-up CT scan was slow (range 2–8 years). None of the patients developed recurrence of the symptoms or progression of the disease during the 2–19 years of follow-up. One patient developed radiation-induced osteosarcoma of the mandible 17 years after the radiotherapy.

Interpretation. This series is one the largest number of angiofibroma cases that were successfully treated with radiation. Most of our patients had locally advanced lesions and many of them had only biopsy or incomplete resections before definitive radiation therapy. A course of definitive radiation not only made these patients asymptomatic but also halted the disease progression. Because of the extensive nature of the disease a higher than conventionally used dose of radiation was used in our patients. These patients must be followed up for the rest of their lives to detect radiation-induced squeal-like malignant lesions at the earliest manifestation in the irradiated region.

The author declared no conflicts of interest.

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AOS28 HIGH PATHOLOGICAL RESPONSE RATE WITH DOCETAXEL PLUS CISPLATIN PLUS FLUOROURACIL INDUCTION REGIMEN IN OESOPHAGEAL CANCER: INITIAL EXPERIENCE

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Background. Induction chemotherapy with cisplatin and fluorouracil is the standard of care for locally advanced oesophageal cancer, but is associated with a 5-year survival of less than 40% and pathological complete remission rate of less than 5%. We present our experience with docetaxel plus cisplatin plus fluorouracil (DCF) as induction chemotherapy in patients with carcinoma of the oesophagus.

Methods. We undertook a retrospective analysis of a prospective database of patients with locally advanced oesophageal cancer who were referred for induction chemotherapy before surgery. All patients had an Eastern Cooperative Oncology Group (ECOG) performance status of 0–1, with no uncontrolled comorbidities. Chemotherapy consisted of 2–3 cycles of standard DCF. Growth factors and prophylactic antibiotics were administered. After chemotherapy, a restaging scan was done. If disease was judged to be resectable, surgery was undertaken. Patients were followed up after surgery and then every 3 months. Toxicity was graded according to CTCAE (version 4.03), response was calculated as per Response Evaluation Criteria in Solid Tumors (RECIST) (version 1.1), and data were reported as percentages.

Findings. Between February 2010 and November 2011, 17 patients had received neoadjuvant DCF. The male-to-female ratio was 1.1:1, median age was 42 years (range 21–63), and median PS was 1. Sixteen patients had squamous cancer and one had adenocarcinoma. Significant (grade 3/4) toxicities included leucopenia (41%), neutropenia (65%), febrile neutropenia (24%), diarrhoea (41%), vomiting (24%), hyponatraemia (47%), hypokalaemia (41%), fatigue (24%), and mucositis (12%). Response rates were CR 41%, PR 41%, SD 12%, and PD 6%. Eleven patients underwent R0 resections, two underwent R1/R2 resection, two were judged to have unresectable tumour and were given chemoradiotherapy, and one had CR but surgery was postponed because of hyperthyroidism. Six (35%) patients had pathological complete remission and in 1 patient carcinoma cells were seen occasionally.

Interpretation. In a select group of patients, DCF induces high complete pathological remission with manageable toxicity. Further assessment of DCF as a neoadjuvant regimen is warranted.

The authors declared no conflicts of interest.

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AOS29 PREDICTIVE FACTORS FOR SEVERE NEUTROPENIA AFTER THE FIRST CHEMOTHERAPY CYCLE IN PATIENTS WITH BREAST CANCER

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Background. Neutropenia after chemotherapy can frequently lead to a life-threatening infection. Unexpected episodes of neutropenia can occur after the first cycle of chemotherapy. We sought to characterise predictive risk factors for severe neutropenia in patients with breast cancer after the first cycle of chemotherapy.

Methods. We prospectively collected data for patients with breast cancer who received the doxorubicin and cyclophosphamide (AC) regimen for any stage at the oncology unit during January to December 2011. Patients who received primary CSF prophylaxis were not included. The correlation between patient's demography, breast cancer history, blood chemistry, and occurrence of severe neutropenia and febrile neutropenia (FN) were analysed.

Findings. Seventy-five patients with breast cancer were included in this study. Their mean age was 49 years (SD $\pm$ 9). Most patients (98.9%) had a good performance status. None had received previous chemotherapy or radiotherapy. There were a few patients with comorbidities, including 1% with type 2 diabetes mellitus, and 19% with hypertension. 4% of the breast cancers were metastatic to the lung and bone. The mean body surface area was 1.59 m^2. All patients had normal baseline white blood cell counts. After the first cycle of AC, 84% and 60% of patients developed grade 3 and 4 neutropenia, respectively, which turned into FN in 20% of patients. Analyses of predictive factors showed no statistically significant correlation between grade 4 neutropenia and age greater than 60 years (RR 0.95, 95% confidence interval (CI) 0.49–2.06), bovine serum albumin (BSA) less than 1.45 m^2 (RR 1.10, 95% CI 0.73–1.67), underweight for body-mass index less than 18.5 kg/m^2 (RR 1.0, 95% CI 0.48–2.1), dietary protein index less than 0.5 g/kg/day (RR 1.05, 95% CI 0.50–2.22), and non-metastatic disease (RR 0.896, 95% CI 0.39–2.04).

Interpretation. Simple clinical factors cannot be used to reliably predict the risk of FN in patients with breast cancer during the first cycle of chemotherapy with AC. For development of future predictive models, the complex relation within datasets should be taken into account such as novel biomarkers or genetic profiles.

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