Bevacizumab in a growing teratoma syndrome. Case report

A growing teratoma syndrome (GTS) is defined as an increase in germ-cell tumor (GCT) size during or after chemotherapy with histology of mature teratoma only in resected tumor.
specimen. Complete surgical resection is the treatment of choice for GTS [1]. The prognosis is poor in case of inoperable GTS. Interferon, steroids or differential agents were evaluated in the treatment of GTS; however, there is no established treatment for this clinical condition when surgical resection is not possible [1, 2].

The angiogenic factors (vascular endothelial growth factor:flt, flk; thymidine phosphorylase platelet-derived endothelial cell growth factor and microvascular density) were evaluated in GCT [3, 4]. The correlation between expression of angiogenic factors and advanced stage, nonseminoma histology and presence of teratoma components was found [3, 5]. Herein we present, for the first time, a case report of a patient with inoperable GTS treated with bevacizumab.

A 28-year-old man presented himself with a 3-month history of swelling in his left testis. Histology from the left orchidectomy revealed teratocarcinoma with abundance of necrotic tissue and granulocyte infiltration. Staging computed tomography (CT) scans revealed mediastinal, retroperitoneal and pelvic lymphadenopathy. Pretreatment serum levels of $\alpha$-fetoprotein (AFP) and $\beta$-human chorionic gonadotrophin ($\beta$-HCG) were 17 900 IU/ml and 2129 mIU/ml, respectively. His initial clinical stage was IIIC. He was treated with four cycles of bleomycin, etoposide and cisplatin chemotherapy. Four weeks after the chemotherapy, the chest and abdominal CT scans revealed up to one-third regression of the initial size of the lymphadenopathy. Radical surgery of the residual tumorous mass was not feasible. The patient remained well for 2 years after the end of chemotherapy. However, later he developed back pain with a large palpable intraabdominal mass. CT scan of the abdomen confirmed the presence of a large left-sided cystic mass in close contact with the inferior vena cava and aorta, and extending down into the pelvis below the confluence of the iliac veins. Serum AFP and $\beta$-HCG were normal. The patient was referred for surgery, however only partial resection of the tumor was possible. The histology of the resected mass revealed differentiated teratoma with no evidence of malignancy. During the period of the next 6 months, we observed slow growth of the remaining tumorous mass by taking CT scans. Serum tumour markers remained normal and there was a high suspicion of growing mature teratoma. The patient started the treatment with a biweekly 10 mg/kg dosage of humanized monoclonal antibody bevacizumab. Tolerance of the treatment was excellent without any significant toxicity. During the 6-month treatment period, there was a sufficient clinical improvement of the low-back pain to allow the possibility to terminate the analgetic treatment. The size of the tumorous mass was stable according to CT scans. However, 40 days after the treatment was stopped extensive disease progression occurred.

There is no effective treatment in case of inoperable GTS. We indicate that continuous inhibition of angiogenesis with monoclonal antibodies or multikinase inhibitors could be one of the new treatment approaches. However, further research in this area is warranted.

M. Mego1,2*, M. Reckova1,2, Z. Syčova-Mila1, J. Obertova1, K. Brozmanova1, T. Salek1 & J. Mardiak1,2

1Department of Medical Oncology, National Cancer Institute; 2Medical Faculty, Comenius University, Klenova 1, 833 10 Bratislava, Slovakia

(*E-mail: misomego@mediclub.sk)

references


doi:10.1136/annonc/mdm125

Published online 13 April 2007