

**FC-028****The individualization of chemotherapy in patients with osteosarcoma depending on angiographic criteria**

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Aim: To determine the possibility to individualize chemotherapy using angiographic prognosis criteria.

Methods: 47 patients with localized osteosarcoma (Stage IIB, G3), aged 18 to 63 years old (median age 30,6), male - 24 (51%) and female - 23 (49%), were treated in National Cancer Institute (Kiev, Ukraine) between 2009 and 2014. All patients' vascular net intensities have been examined through CT-angiography prior to the treatment. The treatment started with a standard regimen (cisplatin 120 mg/m², doxorubicin 60 mg/m², methotrexate 12 mg/m²). Patients have been divided in two groups after 4 courses depending on the angiography grading of tumor response to chemotherapy: first (39 patients) - prognostic good response treated at standard regimen (cisplatin 120 mg/m², doxorubicin 60 mg/m², methotrexate 12 mg/m²) and second group (8 patients) - bad response (remaining tumor vascularity in 10% to 50% of the tumor) treated by adding 2 courses of cisplatin 150 mg/m² (arterial infusion) and ifosfamide 9 g/m², etoposide 300 mg/m². Radical limb salvage surgery was performed in both groups followed by an estimation of the actual medical pathomorphosis (Huvos pathomorphosis grading). After the surgery, patients of both groups have been receiving adjuvant therapy with drugs which were used in a neoadjuvant regimen.

Results: In first group (comprised of 39) was determined a low level (necrosis less than 90%) of pathomorphosis in 5 (12,8%) patients and 3-years overall survival was 77,13%. In the second group, in 5 (62,5%) patients was revealed low level of pathomorphosis and 3-years overall survival was 47,13%.

Conclusion: A high level of residual vascularization of tumor after neoadjuvant chemotherapy was a poor prognostic factor. The dynamic of changing of tumor vascularization as a consequence of neoadjuvant chemotherapy correlated with achieved pathomorphosis. Assessment of the reaction in the tumor vasculature during neoadjuvant chemotherapy helps to individualize treatment and probably influence on long-term results. Necessity of treatment intensification in poor prognostic group remains uncertain. The study is ongoing.