



Treatment results of children with osteogenic sarcoma according to protocols PE-COSS, COSS-96 and COSS-EURAMOS 1

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Abstract

From 1991 until the present 27 patients (pts) with osteogenic sarcoma were treated at the department of pediatric oncology. In all cases diagnosis was confirmed by histology. Patient age ranged from 6 to 17 years, median 12.5 y.o. Sex distribution: f/m = 1/1.5. The Lansky score ranged from 70–80.

Nineteen pts had protocol treatment according to PE-COSS, COSS-96 and COSS-EURAMOS. The remaining 8 pts were treated randomly.

Median time of follow up at present is 71 months (max = 217 mo, min = 7 mo).

Tumor response on neoadjuvant chemotherapy was evaluated in 17 pts according to the Wien classification (Salter-Kuntschi) after surgery.

Ten pts were treated according to the PE-COSS protocol (without a high dose of metotrexate), 8 pts were treated according to COSS, and 1 with the COSS-EURAMOS programs, which include high-dose MTX (12 g/m²).

In the PE-COSS group of pts a good response (I–II) was achieved in 5 pts (50%). Overall survival in this group is 70% (7 out of 10 alive).

In the COSS and COSS-EURAMOS group, a good response was registered in 4 out of 8 pts (57%), however, in one case it was not possible to evaluate since the girl had surgery as a first treatment option in another medical institution. Overall survival in this group is 87.5% (7 out 8 pts alive).

Conclusion: chemotherapy regimens consisting of high doses of MTX provide a more remarkable tumor response on treatment, which reflects positively on the overall survival of pts with osteosarcoma.

Keywords: osteosarcoma, protocol treatment, children, chemotherapy, tumor response

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