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Post relapse survival in patients with Ewing sarcoma

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Background: Post-relapse survival (PRS) in Ewing sarcoma (EWS) is very poor, with less than 15% probability of survival at 5 years in historical series.

The PRS was evaluated in a selected population of patients with EWS treated according ISG/SSG 3 (non metastatic EWS) and ISG/SSG 4 (metastatic EWS) protocols.

Methods:

EWS patients treated in ISG centers according to ISG/SSG 3 and 4 protocols who relapsed after complete remission (by surgery and/ or radiotherapy) were include into the analysis. Data for the analysis were in part prospectively collected and stored in the ISG database and in part were retrieved from clinical charts.

Results:

Data from 72 ISG/SSG 3 EWS patients and 21 patients who relapsed after completion of ISG/SSG 4 protocols were available for the analysis.

49 (53%) of patients had previously received high-dose chemotherapy (HDCT) with busulfan and melfalan.

Median relapse free interval (RFI) was 16 months in ISG/SSG 3 and 17 months in ISG/SSG 4.

Treatment at 1st relapse was: standard dose chemotherapy in 45 (49.5%) patients; HDCT in 24 (26%); palliative treatment in 19 (20.5%) and surgery only in 5 (5%). Three patients died of treatment-related toxicity.

With a median follow-up of 24 months (1-64), the 3-year post-relapse survival (PRS) was 21% in ISG/SSG 3 and 26% in ISG/SSG 4.

In ISG/SSG 3, 3-year PRS was better for patients with a lung only relapse (48%) and a RFI > 2 years (51%).

3-year PRS was 33% (95%CI 13-54) for patients treated with HDCT and 22% (95%CI 6-39) for those who received standard dose chemotherapy.

Conclusions: Pattern of recurrence and RFI are the main factors influencing PRS in EWS. A 3-years PRS >30% can be expected when HDCT can be given at the time of recurrence.

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