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Treatment of rhabdomyosarcoma and other malignant mesenchymal tumours of childhood with ifosfamide + vincristine + dactinomycin (IVA) as front-line therapy

(A SIOP study).

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The main objective of this study was to evaluate the response rate to ifosfamide + vincristine + dactinomycin (IVA) in children with rhabdomyosarcoma (RMS) and other malignant mesenchymal tumous (MMT). The use of chemotherapy as a front-line treatment modality and the inclusion of all MMT in the same protocol were in keeping with the conclusions of previous SIOP studies. IVA consisted of: ifosfamide 3 g/m^2 on days 1 and 2, vincristine 1.5mg/m^2 on days 1 and 14, and dactinomycin 0.9 mg/m^2 on days 1 and 2. If the response was inadequate cisplatinum 100 mg/m^2 + Adriamycin 60 mg/m^2 was substituted for IVA. Surgery and/or radiotherapy was performed to control residual tumour. From January 1984 until January 1987, 245 patients were enrolled in the study, with histological confirmation of MMT in 212: 141 RMS, 47 other classified MMT, and 24 unclassified MMT. In RMS patients with more than 1 year follow-up, CR was achieved within 1 year in 83 %. In patients with measurable RMS, CR was induced in 59 % with IVA as sole tratment. Disease-free survival was 63 ± 6 % at 18 months. When compared with the results of the previous SIOP RMS study, the incidence of local recurrences in stage 1 patients might be significantly higher (25 %). The salvage rate after local recurrence also seems to be much higher: 50 % of these patients who relapsed achieved a second CR.

In conclusion, IVA induced a high response rate when used as the inital therapy of RMS in children. However, if chemotherapy continues to be given priority in the multimodal treatment of RMS in future, control of the disease in the primary site needs to be improved.

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