

RADIO-HYPERTHERMO-CHEMOTHERAPY FOR SOFT TISSUE SARCOMAS

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Purpose: We performed radio-hyperthermo-chemotherapy (RHC) as a new neoadjuvant therapy for 19 patients with high-grade malignant soft tissue sarcomas of the limbs between 2002 and 2004. We report here the effectiveness of RHC for high grade soft tissue sarcomas.

Patients and Methods: Radiotherapy involved the delivery of radiation at a dose of 2 Gy once daily on 16 days to give a total dose of 32 Gy. Hyperthermia was conducted locally once a week, with a total of 5 sessions. The temperature was measured by inserting a hyperthermia needle into the tumor and inserting a thermocouple thermometer into the space. The objective of treatment was to achieve a temperature of 42.5 celsius or more for 60 minutes. Chemotherapy was performed by implanting a reservoir and administering cisplatin (90 mg/M) 3 times and Pinorubin (25mg/M) twice by intra-arterial infusion at weekly intervals. These drugs were administered alternately during hyperthermia sessions. We divided the patients into three groups; 1) complete hyperthermia: intratumoral temperature was more than 42.5 celsius 2) mild hyperthermia; intratumoral temperature was between 40 and 42.5 celsius 3) poor hyperthermia; intratumoral temperature was less than 40 celsius and we evaluated the effectiveness of RHC for those three groups.

Results: The eight patients of complete hyperthermia were all CDF and the histological evaluation were also excellent. Among the poor hyperthermia group, round cell sarcomas such as soft tissue Ewing's sarcoma showed good response histologically.

Conclusions: RHC is currently the most potent and relatively safe treatment method for high-grade soft tissue sarcomas.