Intraoperative Radiotherapy for the Treatment of Soft Tissue Sarcomas of Central Anatomical Sites

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The results of intense therapy for soft tissue sarcomas located in central anatomic sites using an intraoperative electron boost (10-20 Gy) during surgery, integrated in a multimodal approach including external beam irradiation with or without chemotherapy, are analyzed. The relevant clinical data include a total of 30 patients treated, 13 recurrent tumors, 11 primary locally advanced stages, 15 high grade lesions, common location in the trunk (10 cases) and retroperitoneum (8 cases), and macroscopic residual disease after surgery in 9 cases. The median follow-up time for the entire series is 25 months (range 4-98 + months).

Severe toxicity relate to the combined therapy includes peripheral neuropathy in 3 patients, 1 myelopathy, 1 chronic enteritis, 1 rectovaginal fistula, and 1 lethal sepsis. Overall local control rate is 53% (65% in cases with microscopic residual disease and 35% in confirmed macrotumor residue). Subgroup analysis of local control shows a value of 72% (13/18) in patients with lesions of <10 cm in maximun dimension and 28% with tumors >10 cm (4/12). Actuarial survival rates are 36% for the entire series and 53% and 20% for patients with primary and recurrent disease, respectively. It is concluded that intraoperative radiotherapy (IORT) is feasible to be integrated in multidisciplinary programs as a local intensification treatment technique. Peripheral nerves are dose-limiting structures for IORT trials. Local tumos control rates in central sarcomas appear to be related to the status of postsurgical margins and tumor size. Long-term survivors are followed with no evidence of disease both in primary (81 + months) anb recurrennt disease (98 + months) patients.

Key words

Intraoperative radiotherapy, soft tissue sarcomas, central anatomical sites

Effect of Composition and Method of Preparation of Liposomes on Their Stability and Interaction with Murine Monocytes. Infected with *Brucella abortus*

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The succes of the use of liposomes as drug carriers depends on both their formulation and the method of preparation. We have carried out a series of in vitro studies using different formulations and preparation methods, with the aim of obtaining a type of liposome which is efficient in the treatment of brucellosis. On the basis of results obtained in studies of stability at 37 °C in the presence of serum lipoproteins and of the activation of phagocytic cells and antibiotic transport to the interior of monocytes infected with *Brucella abortus,* we conclude that the most suitable vesicles are positively charged, stable plurilamellar vesicles (phosphatidylcholine, 30% cholesterol, and 10% stearylamine). Gentamicin incorporated into these cationic liposomes completely eliminated all of the intracellular *Brucella* organisms (4,6 logs), while free gentamicin was capable of reducing the number of intracellular bacteria by only 0,3 log.