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An analysis of the impact of initial biopsy in localized osteosarcoma. A monocentric retrospective review.

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Introduction :

Many reports attempt to identify the factors which may affect the prognosis in osteosarcoma. We wanted to determine whether the technique of biopsy and/or the initial management could be prognostic factors of long term survival.

Patients : 139 p. (88 males and 51 females aged 4-58 years) with localized high grade osteosarcomas of the limbs were treated and/or followed up by our team between 1984 and 1998. 75 first hand patients had the biopsy performed by the surgeon of the team after local evaluation of the tumor and planning of future en bloc resection. The 84 other patients were referred to us after biopsy or/and induction therapy. No significant differences in initial prognostic factors were observed between the two groups.

Method :

All patients received pre and postoperative chemotherapy according to the current protocols at the time of their treatment. 3 p. (all referred p.) were primarily amputated. All the other were treated by limb salvage even for fractured or huge tumors and in very young p.

Results :

With a median follow up of 10 years (maximal 16 - minimal 2) 12 local recurrences were observed : 10/84 (12%) in referred patients and 2/75 (2.6 %) in first hand patients. 54 % (46/84) of referred patients are alive in complete remission compared to 73 % (40/55) of first hand patients (93 % for first hand patients treated by our protocols since 1/1986). In multivariate analysis, the difference is significant ($p < 0.02$).

Conclusion :

Initial management by an experimented team is of crucial importance in long term survival of patients with localized high grade osteosarcoma of the limb. When the diagnosis of osteosarcoma can not be excluded on prebiopsy medical imaging of bone tumor, the patient should be referred, before biopsy, to team experimented in bone tumor oncology.