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Long term results of limb salvage surgery in 498 bone sarcomas in 25 years.

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Objective :

The present study of consecutive operable sarcomas treated by the same team tries to answer the main question about limb salvage : Is it usually feasible ? Is it worthwhile ? It is dangerous ? Can radiotherapy help ? What is the optimal timing for surgery ?

Method :

From 1/1975 to 31/12/2000, 498 bone sarcomas were treated by a multidisciplinary team. The average age of patients was 27.1 years. The average size of the tumor was 13,1 centimeters. Histology was 231 osteosarcomas, 118 chondrosarcomas, 104 Ewing, 25 malignant histiocytomas, 12 fibrosarcomas and 8 miscellaneous. The main tumoral location was femur in 203 p., innominate in 98, tibia in 86, humerus in 60. Staging was III in 64. In bloc resection was performed by the same surgeon. Margins showed that the resection was wide in 295, marginal in 185 and contaminated in 18. Adjuvant therapy was adapted to age, histology and location.

Postoperative radiotherapy :

(35-50 grays) was administrated in some adults with osteosarcoma and Ewing, whose histological response to neoadjuvant chemotherapy was bad and resection marginal or contaminated.

Results :

With a median follow up of 11 years, 252 p. are alive without disease, 8 still receive treatment and 238 are dead from illness or complications. 35 local recurrences occurred, most of them (26) in p. who were referred after ineffective radiotherapy or chemotherapy.

Complications : 42 deep infections occurred and 24 p. were secondarily amputated.

Functional results : At last follow up, the function was excellent in 52, good in 35, fair in 7 % and poor in 6 %. It hanged mainly on the size of the tumor's location and could be altered by complications (infection) or radiotherapy.

Conclusion :

In our experience, limb salvage is feasible in more than 95 % of cases, even for huge or fractured tumors, even in young children.