

High value of cryosurgery in the treatment of low grade bone sarcoma.

Delepine G. Delepine F., Guikov E., Delepine Nicole

Introduction :

Cryosurgery has been used extensively for many aggressive or recurrent benign tumors but till now few cases were described in treatment of bone sarcomas.

Patients :

5 p. (4 males and 1 female aged 17-56 y.) with low grade bone sarcomas were treated by curettage and cryotherapy between march 96 and july 2000. Histology was chondrosarcoma in 4 and multifocal epithelioid hemangioendothelioma in one. As the p. with epithelioid hemangioendothelioma received cryotherapy for 2 locations, 6 different tumors were treated : 2 proximal tibia, 2 distal femur, 1 os calci and one sacral bone. Cryotherapy was preferred to classical treatment by wide resection to avoid amputation in 2 p., extra-articular resection in 1, massive prosthesis in 1 and major neurologic saequellae in 1.

Method :

Following intra-capsular curettage the residual cavity was filled with liquid nitrogen. The freeze was maintained for several minutes and then allowed to thaw. Freezing and thawing was repeated 2 or 3 times. In all the limb locations the cavity was then filled with methacrylate and osteosynthesis performed to prevent secondary fracture. After operation immediate mobilization and full weight bearing were authorized. On august 1, 2000 median FU is 36 m..

Results :

2 skin sloughs (one followed by deep infection of os calci) were observed and compelled to reoperate. The p. with a chondrosarcoma of the sacrum suffered from painful paresthesia during 6 months. No fracture nor recurrence was observed till now. The late functional score was rated excellent in 3 p., good in 2.

Conclusion :

In selected low grade bone sarcoma, cryotherapy yields oncologic results as good as marginal resection and permits much more conservative surgery. Despite unpredictability and complications of freezing, cryosurgery should be considered for low grade intracompartmental (grade IA) bone sarcoma.