

MUSCULO - SKELETAL ONCOLOGIC  
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2

CONTENTS

\* Introduction

1- Curettage ..... 1

2- Resection or Excision ..... 10

3- Amputation ..... 24

4- Reconstructive Surgery ..... 36

5- Internal Fixation of Metastatic Fracture ..... 55

6- Summary ..... 73

7- References ..... 77

\* Arabic Summary

**INTRODUCTION**

## CHAPTER 1

### **CURETTAGE**

Most benign lesions of bone can be successfully treated to be curettage with or without grafting; but this is dependant on the size and location of the lesion (P. G. Carnesale and J. A. Pitcock. 1980).

#### [1] CURETTAGE OF GIANT CELL TUMOURS

There is seldom - if ever - an indication for curettage alone and if it is done alone as a primary treatment for giant cell tumours in long bones, it should be restricted to small tumours which are surrounded by intact cortex. Curettage alone gives a poor cure rate (Goldenberg, R. et al, 1970).

Mergrathy, P. J. (1972) has stated that during curettage of a giant cell tumour, a sufficient amount of the overlying apparently healthy bone must be removed and care must be taken to avoid seeding with tumour cells through :

- (a) Firmly applied or better sealed, side curtains for nearby soft tissue protection.
- (b) Never to open the outer shell or better its false capsule while dessecting the tumour mass.
- (c) A set of gowns, gloves, towels and instruments for curettage and another for obtaining the graft.

Cauterization of the wall or Zinc chloride installation



Fig. (1) Giant cell tumour of the distal end of the femur

curettment, liquid nitrogen is poured directly into the tumour cavity, then bone grafts are used to fill the defects.

The complications of cryosurgery include infection, fracture through the weakened bone and temporarily neuropraxia (Shifrin, L., 1972).

Acrylic cement may be installed in the cavity created by aggressive curettage. The most notable advantage when compared with crosurgery is that no important complications such as fracture are noticed, simplicity of the technique and early functional results. This method is similar to that of cryosurgery in that they are killing bone and residual tumour tissue left behind with a form of thermal treatment (Johnston, J., 1977).

### [II] CURETTAGE OF ENCHONDROMA OF THE BONES OF THE HAND

The prognosis of simple treatment, primary curettage and bone grafting, is usually quite good and recurrence or neoplastic transformation rarely occurs (Gwo-Jwo Wang et al, 1979).

Although Enchondromas are benign, malignant transformation has been known to occur, particularly when the long tubular bones are involved.

Because of the possibility of malignant degeneration, all



Fig. (2) Enchondroma of the proximal phalanx of the little finger.

such tumours should be treated.

Various methods of treatment have been proposed; curettage and packing with different types of bone chips, and total excision of the involved bone. Since all reported methods of treatment of this condition have been uniformly successful, the method of treatment selected should be the one most advantageous to the patient under the prevailing circumstances (Commonder Edward E. et al, 1971).

Although curettage alone may be all that is necessary for the treatment of this lesion, we could find no published series of cases in which this method was used. We therefore believe that since packing with bone chips accelerates the rate of healing and assures more normal bone strength, bone grafting should be performed (Commonder Edward E. et al, 1971).

Commonder Edward W. et al (1971) evaluated forty-one cases with enchondromas of the bones of the hand; each patient was treated by curettage of the cartilagenous tumour followed by firm packing of the cavity with freeze dried cancellous bone allograft. In all these patients, there was roentgenographic evidence of healing of the enchondroma with incorporation of the bone graft. Healing occurred as early as three months and as late as twelve. There was no instance of recurrence of the tumour. The author believed that since malignant degeneration from enchondroma into chondrosarcoma can occur and excellent

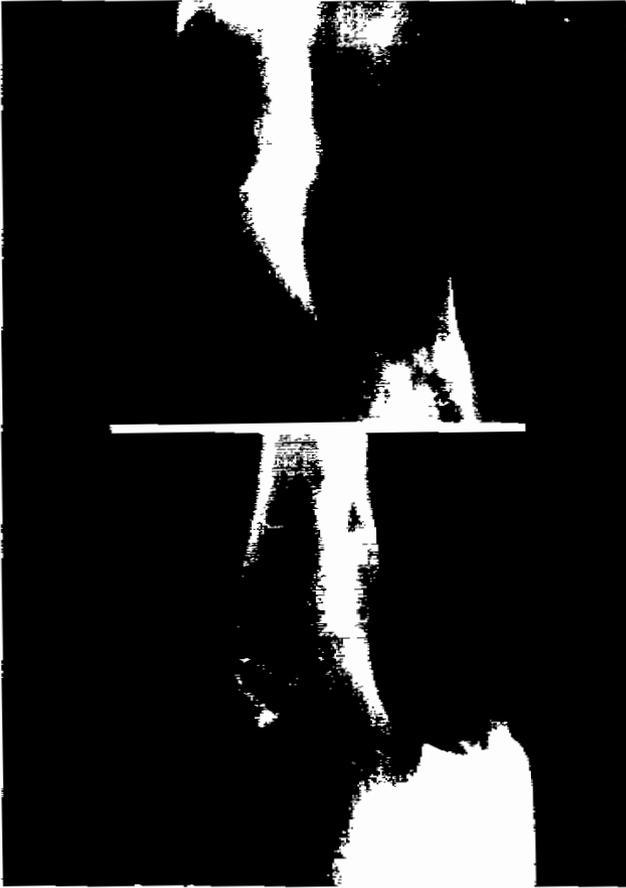


Fig. (3) Unicameral bone cyst of the proximal femur.

51

results can be expected from surgical curettage and packing with cancellous bone allograft, it would appear that under ordinary circumstances this treatment may be preferred.

Karuoki Takigawa (1971) reported 110 cases of chondroma of the bones of the hand. Simple curettage was performed mostly in cases of the eccentric form of chondroma. Curettage and autografting were performed mainly for the central or polycentric form of chondroma.

Evaluation of the results in this series were made according to four criteria :

- (1) The appearance; accepted or not.
- (2) Active range of motion; eighty percent or more of normal when compared with the opposite side.
- (3) Grip and pinch; eighty percent or more when compared with the opposite side.
- (4) Roetgenographic evidence of healing without shortening, deformity, osteo-arthritis, or recurrent tumour.

The results in this series were graded as :

- (1) Excellent : when the four criteria are met.
- (2) Good : when three of the four criteria are met.
- (3) Fair : when two of the four criteria are met.
- (4) Poor : when one or none of the criteria are met.

The results of this series :

- (1) Simple curettage was performed mostly in cases of the eccentric form of chondroma and excellent results followed.
- (2) Curettage and autografting were performed mainly for the central or polycentric form of chondroma.  
The results were good in the monostatic type but less so in the polystatic type, the functional handicap as well as the appearance were usually worse than in the monostatic type. However, healing of the graft was good in all fingers unless the curettage or grafting were inadequate.
- (3) Curettage and heterogenous grafting, such as Boplant or Kiel bone, were performed in four cases of monostatic chondroma of the central form. The fingers showed satisfactory clinical results in general. However, roentgenograms demonstrated rather poor assimilation of the grafts by the recipient bones.
- (4) Few patients refused surgical procedures. They were followed periodically and checked by physical and roentgenographic examination. An interesting observation in these patients was that a natural healing process took place in some.
- (5) Recurrence of the tumour was observed in five fingers (4.5%). The reason for the recurrence was ascribed to the inadequacy of curettage and insufficiently packing of some chips.

### [III] CURETTAGE OF ANEURYSMAL BONE CYSTS

A single cavity, usually containing unclotted flowing blood, is encountered in most patients with an aneurysmal bone cysts. The cyst may also contains serosanguineous fluid (Jaffe, H. L. et al, 1958).

Lichenstien (1957) strongly emphasized early dignosis and prompt treatment least serous damage be done at the affected site where the lesion may attain a huge size or destruction of large number of vertebrae and irreversible paraplegia in the case that the lesion affects the spine.

He cosidered that through curettment and packing with bone chips is possibly the treatment of choice for lesions in readily accessible sites which are still of relatively small or moderate size.

The accepted method of treatment of aneurysmal bone cysts is curettage with bone grafting, althougha recurrent rate of thrtly per cent has been reported (Eugene J. Dabezies, 1982).

Cryosurgery using liquid nitrogen within the cavity has been reported to reduce the recurrence rate to fourteen per cent (Eugene J. Dabezies, 1982).

Radiation reduces the recurrence rate to eight per cent, but this modality should be reserved for surgically inaccessible, incompletely excised, or recurrent lesions.

With radiation therapy, there is always a possibility of damage of the physis and the late development of sarcoma (Donaldson, W. F, et al, 1962).

Biesecker, Marcove, Huvas and Mike (1970) have stated that cryosurgery has the following advantages in the treatment of aneurysmal bone cysts :

- (1) It avoids the extension loss of bone with block dissection.
- (2) It avoids growth disturbances and neoplastic complication that may occur with radiotherapy.
- (3) Low recurrence rate.
- (4) It is accompanied by prompt relief of pain and rapid healing.

#### [IV] CURETTAGE OF UNICAMERAL BONE CYST

Surgery is indicated primarily because of diminished strength of the bone and the threat of repeated fracture.

The traditional way of treating unicameral bone cysts has been curettage and grafting. Recurrence of a degree requires re-operation after curettage is about twenty-four per cent (P. G. Carnesale and J. A. Pitcock, 1980).

Border, H. M. (1973) has reported one recurrence in twelve cases after use of high-speed burr on the cyst walls after curettage.