SOFT TISSUE RECURRENCE OF OSTEOCLASTOMA

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We report a case of osteoclastoma of the distal radius originally treated by curettage, then by resection and bone replacement. There was a soft tissue recurrence of the tumour 13 years later.

The rate of recurrence of primary giant-cell tumour after treatment by curettage with or without bone grafting is about 50% (Johnson and Dahlin 1959). When the tumour is at suitable sites, there has been increasing support for local 'en bloc' resection and autogenous bone replacement (Campbell and Akbarnia 1975; Pho 1981). After this procedure there have been few reported cases of local recurrence, either in the bone or the surrounding soft tissues (Thomas 1952; Goldenberg, Campbell and Bonfiglio 1970; Frangakis 1971; Harris and Lehmann 1983).

We report a case of osteoclastoma at the distal end of the radius, which, after an unsuccessful curettage, was excised en bloc and reconstructed by a fibular autograft. Thirteen years later, a local soft tissue recurrence appeared.

CASE REPORT

A 30-year-old woman was admitted in 1972 with a painful swelling of her right wrist. One year earlier, she had had an operation in another hospital, where a giant-cell tumour of the lower radius had been diagnosed and treated by curettage and bone grafting, through a posterolateral approach.

Recurrence of the giant-cell tumour was diagnosed and treated by an extra-periosteal resection of the lower third of the radius, with excision of the pronator quadratus, using an anterior approach. The excised bone was replaced by the upper third of the ipsilateral fibula (Fig. 1). Histology confirmed the presence of a grade I to II giant-cell tumour (Fig. 2).

The patient was followed up for six years; she had a pain-free wrist with 50% of the normal range of movements and was able to do quite heavy manual work, including agricultural activities. Thirteen years after her second operation, she was re-admitted with a painless...
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Fig. 3
Radiographs 13 years after resection showing the soft tissue mass overlying the dorsum of the wrist.

Fig. 4
Arteriogram of the recurrent tumour.

Fig. 5
Microscopic appearance of the soft tissue recurrence.

soft tissue mass about 10 cm in diameter over the dorsum of her wrist (Fig. 3). This mass had developed and enlarged gradually, over a few months and had not impaired joint function. Investigations included routine radiographs, CT scans and arteriography (Fig. 4). The swelling was completely excised with the overlying skin. The tumour was found to originate from the sheath of the extensor tendons and the surrounding soft tissues. There was no involvement of the bone, confirming the radiographic and CT findings. The histological diagnosis was grade I to II giant-cell tumour of the soft tissues (Fig. 5).

Two years after her most recent operation the patient has a pain-free wrist with no local recurrence; chest radiographs are clear. The radiocarpal joint is dislocated, but has a 50% range of movement, and hand function is the same as before the last recurrence.

DISCUSSION

Local soft tissue recurrence of osteoclastoma after extensive en bloc resection and replacement by autograft should be rare. We have found six cases in the literature involving the bone and the soft tissues (Thomas 1952; Goldenberg et al. 1970; Frangakis 1971; Harris and Lehmann 1983). The cause of this type of recurrence is probably tumour cells left behind or seeded in the surrounding soft tissues at operation. These cells later invade the bone graft, which may be particularly susceptible since it is not completely revascularised (Harris and Lehmann 1983).

Our patient did not have radiotherapy, which might have prevented the soft tissue spread of tumour cells (Riley, Hartmann and Robinson 1967). The very late recurrence is difficult to explain; Goldenberg et al. (1970) have reported that 97% of recurrences in their series appeared within two years. Our case provides further support to the Johnson and Dahlin (1959) suggestion, that the longer such cases are followed up, the higher the rate of recurrence. The many years that had passed between the replacement and the recurrence had probably allowed the bone graft to be completely revascularised, as shown in the arteriogram; this could explain why the autograft remained unaffected.

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REFERENCES


