ORIGINAL ARTICLE

Methods Used for Reconstruction in Aggressive Bone Tumours: An Early Experience

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Summary

Improvements in the overall treatment of patients with aggressive, large tumours involving the bone have made it possible to preserve and salvage limbs instead of amputating them. Each patient is unique in his clinical presentation and social circumstance. The different reconstructive options available allow us to choose the most appropriate method suited to the particular patient and with minimal delay, even when resources are limited. The patient and the relatives actively participate in the choice. The early experience of the different techniques for reconstructing these bone defects at our hospital are presented in this paper.

Key Words: Aggressive bone tumours, Reconstruction

Introduction

Various methods can be used to reconstruct the large osseous defects after a wide excision has been done. Options include the use of allografts, with or without a metal prosthesis; endoprosthetic replacement; composite reconstruction using allografts and metal prosthesis; and arthrodesis[1]. Each technique has its capabilities and limitations. Aggressive bone tumours are not common. Patients in whom limb salvage surgery with reconstruction can be done is even less common because many patients present late in this country. The aim of this paper is to present a series of patients with different methods of bone reconstruction being done at the Sarawak General Hospital.

Materials and Methods

From a list of patients with aggressive bone tumours treated with excision and reconstruction at our hospital from April 1997 to August 2002, ten patients with different reconstructive methods who had longer follow-ups were selected. Four patients had osteosarcoma; another four had giant cell tumour; one had squamous cell carcinoma eroding into the tibia and one had a metastatic carcinoma from the breast. Two of the patients have died of their disease and the rest are being followed up.

Results

Fibula autograft for the distal radius (Fig. 1)
This is a 21-year-old man with giant cell tumour of the distal radius. The tumour was excised en bloc and the distal radius reconstructed with a 10cm length of the ipsilateral proximal fibula. The fibula autograft was fixed with a plate and union took place after two months. His wrist dorsiflexion and palmarflexion is reduced to 30 degrees but he has full function of his fingers. He has no pain and has been able to continue to work as a welder at three years of follow-up.

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