

## Spontaneous Regeneration of a Large Sequestered Diaphyseal Segment of Tibia

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### Introduction

The treatment recommended for the loss of a significant part of the shaft of the tibia secondary to osteomyelitis and trauma is transplantation of the ipsilateral fibula to bridge the gap.<sup>1</sup>

A case in which spontaneous regeneration of a sequestered segment of tibia occurred in a girl is being reported for the first time in Nigeria as far as the author can tell.

### Case Report

JM, an eight-year old Nigerian girl, was admitted to Ahmadu Bello University Hospital, Zaria, with a six-month history of discharging lesions in the left forearm and right leg following a febrile illness, which, prior to the admission, was treated by traditional healers. There was no history of trauma. The child was not toxic but there were two discharging sinuses in the left forearm and a 3cm x 4cm discharging wound on the right leg with about 3cm of sequestered tibia exposed. Hb genotype was A. *Staphylococcus aureus*, sensitive to ampiclox, lincomycin and chloramphenicol, was isolated from the purulent discharges. X-ray of the tibia (Fig. 1) showed chronic osteomyelitis of the tibia with a large sequestrum. Similar findings occurred in the left ulna.

Eighteen days after admission, sequestrectomies were performed on both the tibia and ulna, leav-

ing a gap in the diaphysis of the right tibia (Fig. 2). Both limbs were put in protective plaster cast. Three months after the operation, regeneration of the gap in the tibia had progressed (Fig. 3) and by six months post-operatively, the regenerated segment had consolidated sufficiently for the cast to be discarded and the limb safely mobilised (Fig. 4).

### Comments

Traumatic extrusion of diaphyseal segments of long bones have been previously reported.<sup>2-5</sup> Treatment in these cases have included replacement of the extruded segments<sup>2-4</sup> and by expectant management in children, resulting in regeneration of the extruded segments.<sup>5</sup> Regeneration of a diaphyseal gap in a growing child can therefore apparently occur provided there is an intact periosteal tube. The present case suggests that such spontaneous regeneration may also occur in gaps resulting from haematogenous osteomyelitis in children.

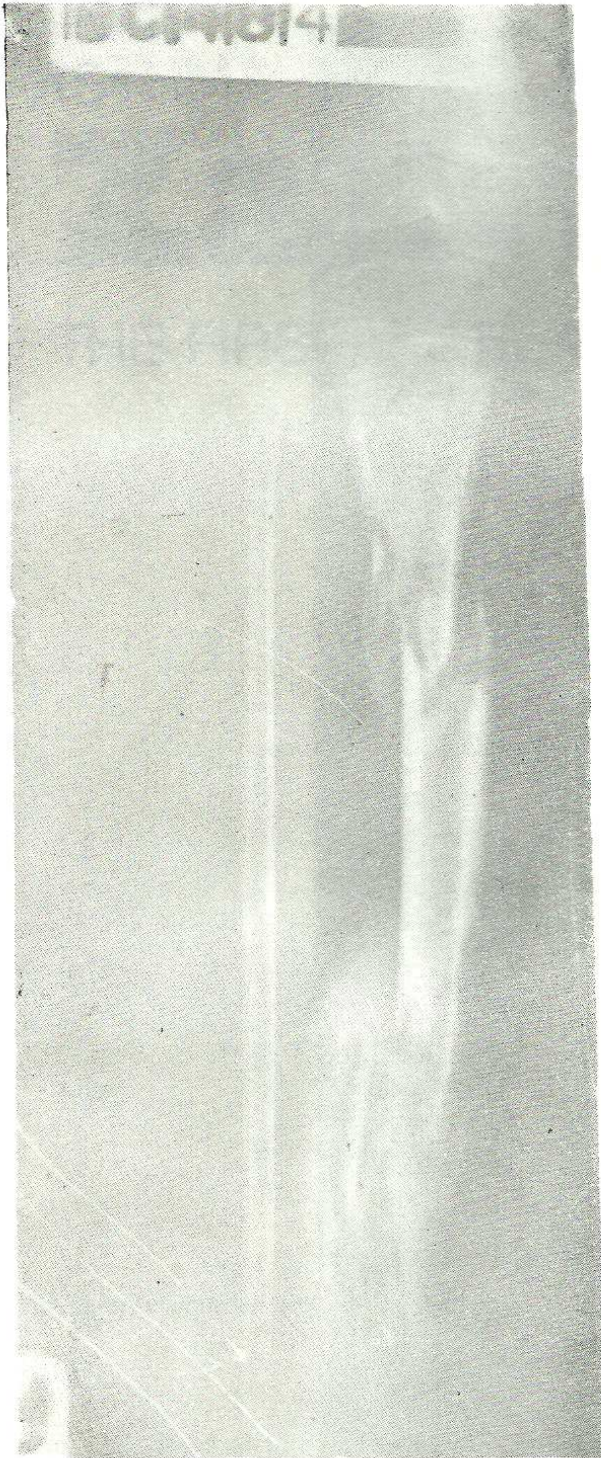
### References

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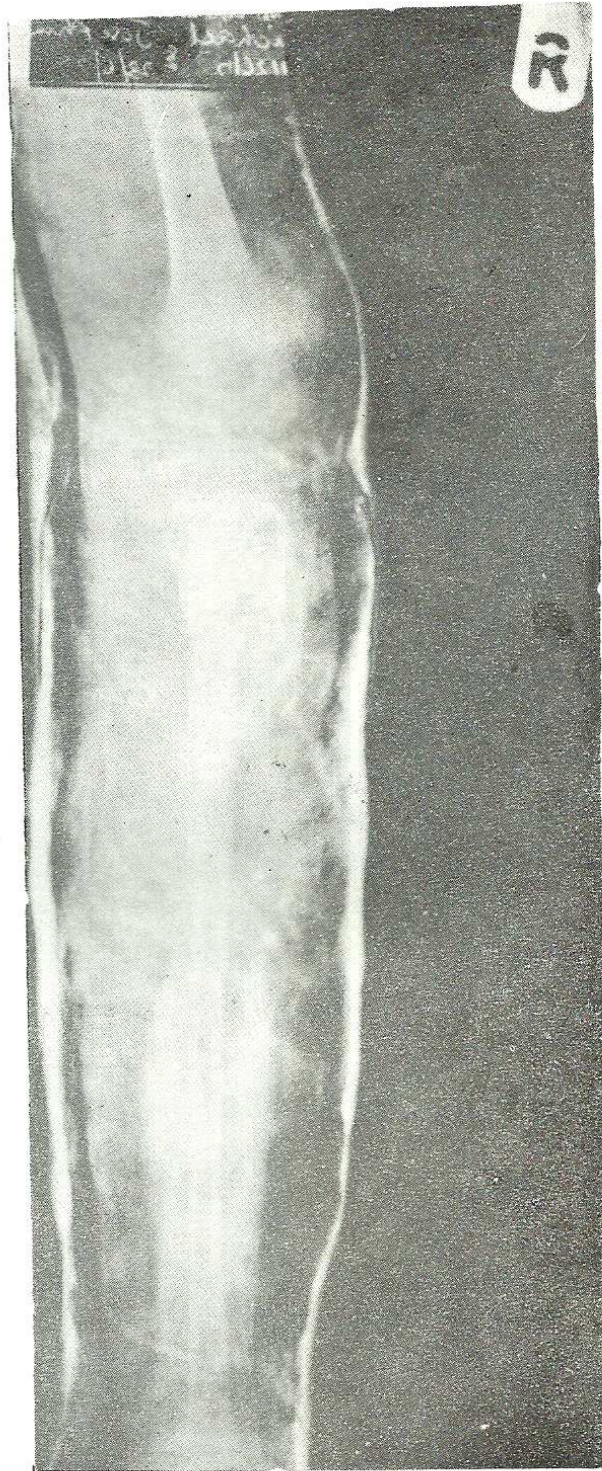
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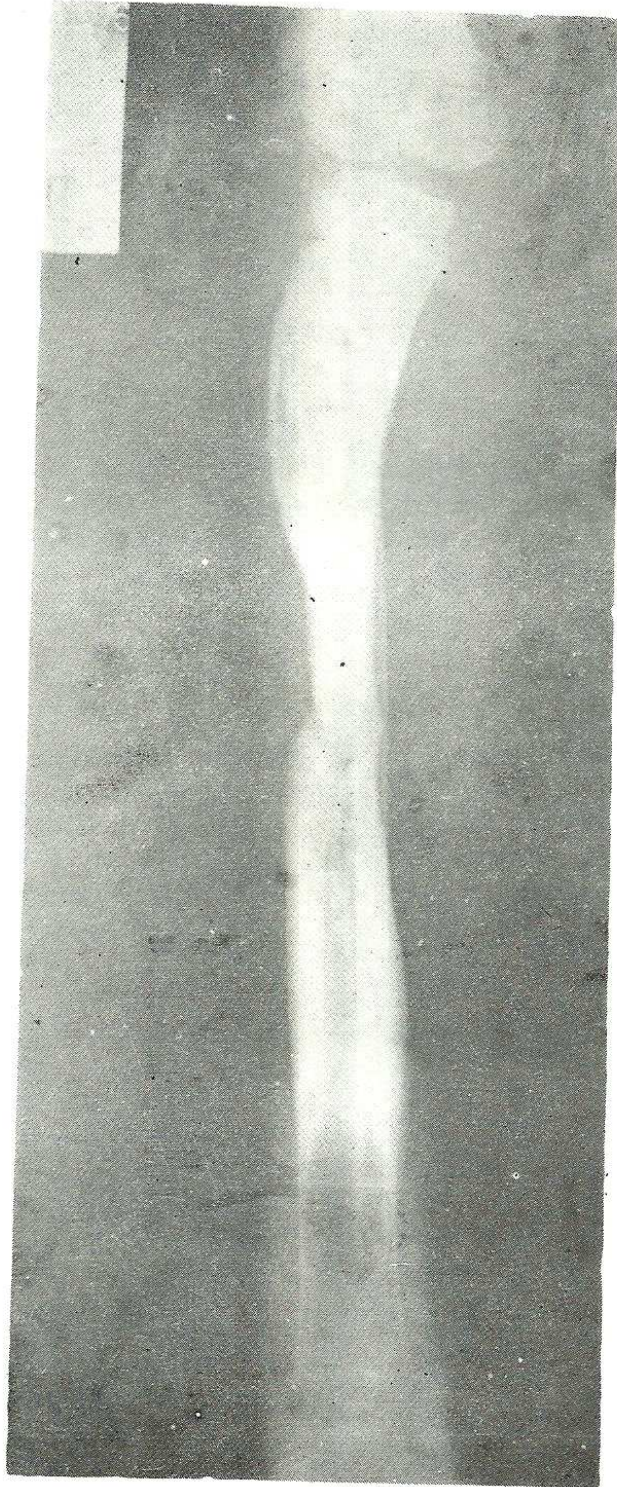
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*Fig. 1* Radiograph of the tibia showing chronic osteomyelitis with a large sequestrum.



*Fig. 2* 18 days post-operative radiograph of the tibia in plaster cast. Note the gap in the diaphysis.



*Fig. 3* 6 months post-operative radiograph of the tibia. Note that the regenerated segment has now consolidated and the plaster cast removed.