

# Peri-osseous loose sequestra in recurrent osteomyelitis in children

A 10-year retrospective study at an African hospital  
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## BACKGROUND

Recurrence of osteomyelitis may follow inadequate initial management or during the later stages of treatment. Persistent nidus of infection, overlooked sequestra and unrecognised tuberculosis may contribute to relapse.

A rarely reported cause of recurrence of osteomyelitis is the presence of loose sequestra around segments of bone, in children with haematogenous osteomyelitis.

AIM

A retrospective review of cases of children with loose sequestra, to characterise the epidemiology and the key clinical and radiological findings.

## METHODS

|            |                                                                    |
|------------|--------------------------------------------------------------------|
| 10 years   | Retrospective study                                                |
| 0–16 years | Paediatric population                                              |
| 1,900      | All cases of haematogenous osteomyelitis treated at CoRSU reviewed |
| Data       | Epidemiological, clinical and radiological data collected.         |

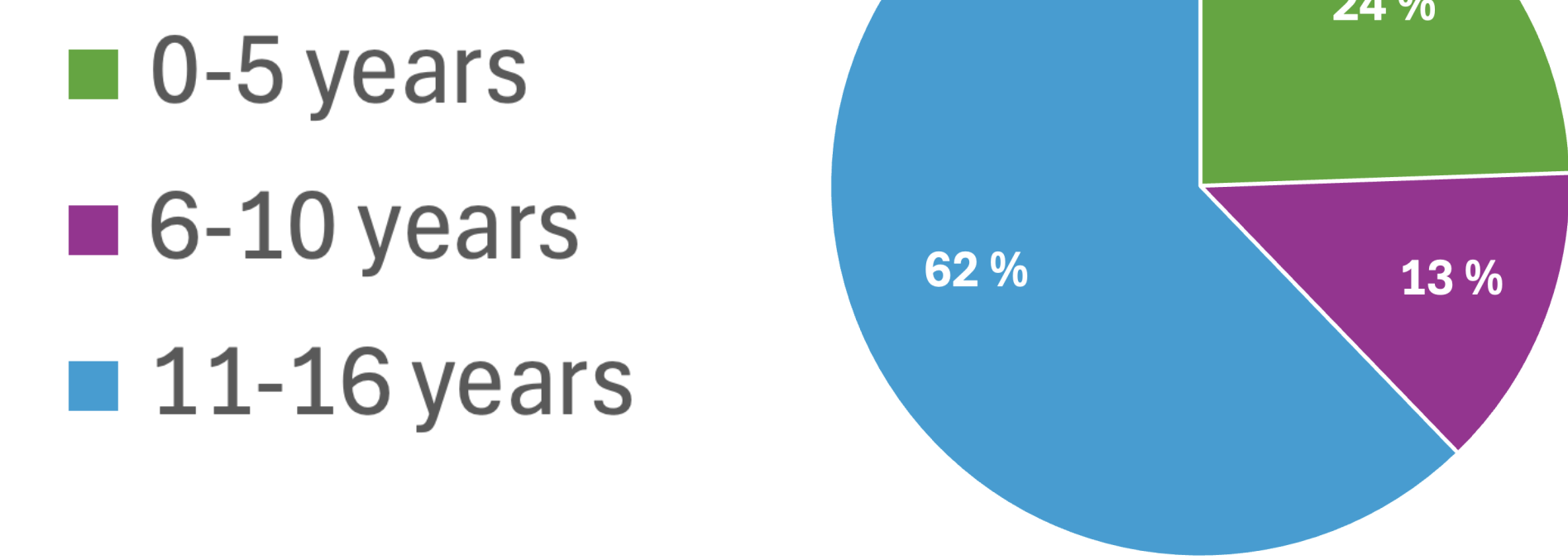
Exclusions: incomplete datasets and post-traumatic osteomyelitis.

## RESULTS

90

Children with radiological loose sequestra identified  
No sex predominance

### AGE DISTRIBUTION



### HISTORY OF MANAGEMENT

|     |                                  |
|-----|----------------------------------|
| 62% | previous medical management only |
| 38% | previous surgical management     |

### LOCATION OF SEQUESTRA



## RADIOLOGICAL & OPERATIVE FINDINGS

### KEY RADIOLOGICAL FEATURE

Thin sequestra lying completely free from the bone, without surrounding involucrum (Fig 1 and Fig 2).

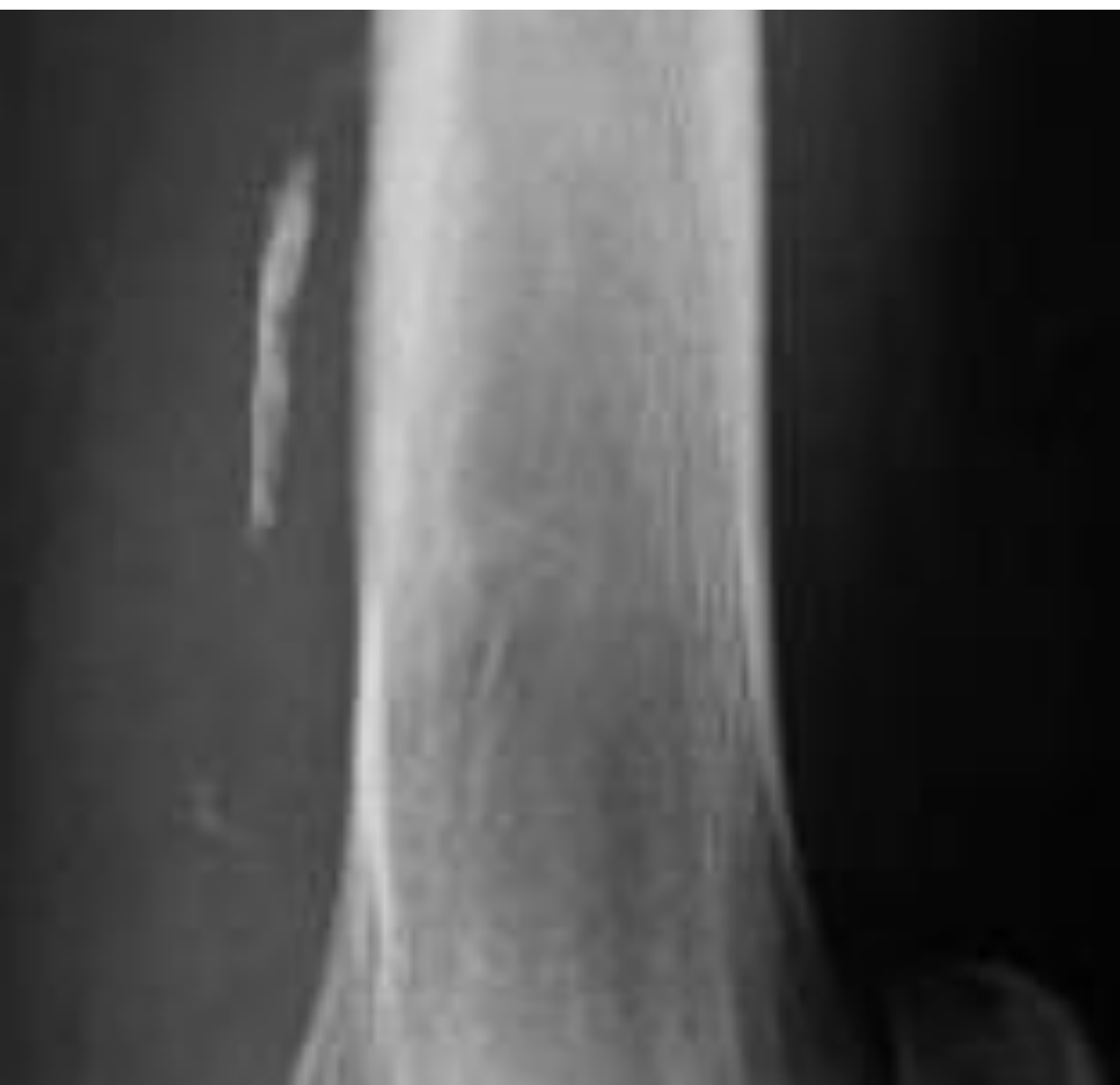


Figure 1- Loose sequestrum in the distal third of the femur of a 14-year-old male, with a history of untreated osteomyelitis 48 months prior



Figure 2- Loose sequestrum lying in the interosseous membrane of the forearm of a 12-year-old girl, who had previous surgical management at this site.

### KEY OPERATIVE FEATURE

All children underwent operation.

At surgery, the sequestra were found floating in large pouches of pus encircling the bone.

### INTRAOPERATIVE BIOPSY

62 patients had biopsy

59

showing chronic osteomyelitis

3

showing tuberculous osteomyelitis

### FOLLOW-UP

36 children had >12 months follow-up

## LIMITATIONS

- Retrospective study
- Single-centre cohort
- Long-term follow-up available in 40% of children

## CLINICAL SIGNIFICANCE

1. THINK OF IT

Consider a loose sequestrum in children with recurrent osteomyelitis, particularly with distal femoral disease.

2. LOOK FOR IT

Obtain recent, high-quality radiographs — the sequestra are small and mobile.

3. REMOVE IT

Complete surgical removal may be required to eradicate the persistent nidus of infection.

<sup>1</sup> Comprehensive Rehabilitation Services for people with Disability in Uganda