

## A Rare Case of a Traditional Indian Medicine Therapy (Desi Massage) Leading to Acute Osteomyelitis of Right Calcaneum in a Child

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### Abstract

A 10-year old child presented to ED with pain and swelling over the right ankle for 2 days

H/O right ankle twist 3 days back and the patient had undergone traditional Indian medicine treatment (desi massage) No H/O Juvenile arthritis or vasculitis Outside X-ray suggestive of - no obvious bony abnormality MRI Right ankle joint done in ED which showed diffusely altered calcaneal signal, osteomyelitis large associated collections in the adjacent tissue Partial tear of the plantar fascia at its calcaneal attachment laterally.

**Keywords:** Acute Osteomyelitis.

### Introduction

#### Acute Osteomyelitis

It is the infection of bone caused by pyogenic organisms resulting in bony changes and destruction.

It develops by the spread of infection from contiguous structures or by hematogenous spread.

Hematogenous spread is the most common source of infection in children typically affecting the long bones where blood flow is rich.

#### Case Study

A 10-year old child presented to ED with pain and swelling over the right ankle for 1 day

H/O right ankle twist 3 days back and the patient had undergone traditional Indian medicine treatment ( desi massage )

No H/O Juvenile arthritis or vasculitis

Outside Xray suggestive of - no obvious bony abnormality

Physical examination revealed the stable, in severe pain conscious, oriented, vitally stable: Pulse: 88/min, BP: 100/60 MMHG, RR: 18/min, Temperature: afebrile, Spo2-99% on room air, No Pallor seen.

Extremities -

Reddening of skin over ankle

Local rise of temperature present

Crepitus present

Range of movements painfully restricted

Toe movement present

P/A - Soft, Non-tender, No organomegaly/guarding/rigidity.

Neurological, Cardiovascular, Respiratory examinations were insignificant.

MRI Right ankle joint done in ED which showed diffusely altered calcaneal joint signal, osteomyelitis large associated collections in the adjacent tissue

Partial tear of the plantar fascia at its calcaneal attachment laterally.

Lab Reports- TLC- 19900, CRP- 45

Orthopedics consultations were requested and the patient was admitted.

The Patient underwent Incision and drainage with an Arthrotomy of the right ankle and the patient has a drain in situ, and after 2 days patient again underwent dressing, drain removal, and packing of the wound.

The patient was discharged home after 2 days in a stable condition.

#### *Course in the Hospital and Outcome*

After initial pain management, the patient was immediately taken for MRI. MRI (FIG 1 and 2) revealed diffusely altered calcaneal signal, osteomyelitis large associated collections in the adjacent tissue

Partial tear of the plantar fascia at its calcaneal attachment laterally.



Fig. 1: MRI of Right Ankle.



Fig. 2: MRI Right Ankle Lateral View.

TLC- 19900, CRP- 45

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#### **Discussion and Therapeutic Considerations**

Osteomyelitis is an infection of bone sustained most commonly by bacteria.<sup>1,7</sup> According to the period between diagnosis and symptoms onset, osteomyelitis classified as acute (< 2 weeks), sub-acute (2 weeks- 3 months), or chronic (> 3 months). Acute Osteomyelitis in children is a serious disease that, when detected and treated early, can heal without severe sequelae. Bacteria may reach bone marrow through the bloodstream or spreading from nearby tissue. Infection can also be after an injury that exposes the bone to a contaminated environment.<sup>1,7</sup>

Primary hematogenous osteomyelitis most frequently involves the metaphysis of long bones, i.e., femur (23%-29%), tibia (19%-26%), and humerus (5%-13%). The lower extremity is more commonly affected. Multifocal forms are uncommon.<sup>3</sup>

Dartnell et al.<sup>4</sup> reported that fever was the presenting symptom only in 61.7% of children with acute osteomyelitis, while pain and swelling and erythema were present in 81.1% and 70% of the cases, respectively. In this case, there is no history of fever or upper respiratory tract infection, or trauma. He started experiencing symptoms (redness, swelling, severe pain) after he had undergone traditional Indian medicine treatment for mild pain after an ankle twist. (No bony injury on x-ray done outside the hospital.

<sup>2,5,6</sup>Most pediatric osteomyelitis originates as a bloodstream infection. The route of entry may be the respiratory tract for *S.pyogens* and *S.pneumoniae*, while the skin may be a common port of entry for *S.aureus*. It also spreads from contagious tissues or direct trauma or surgery.

## Conclusion

Why we should avoid traditional Indian massage?

For the purpose to avoid dangerous complications as in this case the 10-year boy had an ankle twist and mild pain. Xray ankle done same day showed no bony injury but after taking a massage for 2-3 days patient developed redness, swelling, and severe pain of the right foot and limb for which the patient came in an emergency.

Risk factors associated with osteomyelitis are bone abscess, bone necrosis, cellulitis, blood infection (septicemia).

Osteomyelitis may lead to stunted growth in children if the infection has involved the growth

plate leading to septic arthritis for which the patient may need treatment for a long time.

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