An unusual case of thumb swelling

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Clinical History

38 yr old male patient came with

• C/o swelling over right thumb - 2 years
• Progressively increasing in size.
• The patient could not recall any specific incident of trauma prior to the onset of the swelling
• No/H/O discharge/ similar swelling in other sites.
• No/H/O pain and aggravating or relieving factors
• No/H/O DM/HTN/TB/surgery
X-ray – Right thumb

Diffuse soft tissue thickening

Bony scalloping

Bony scalloping
Local USG of Right thumb

“dot in circle sign”.
“dot in circle sign” is a characteristic MRI feature for this condition. Rounded hyperintensity (representing granulation tissue), surrounded by a low signal intensity rim (representing fibrous septa) with a hypointense dots (representing fungi) in the center.
Provisional diagnosis of Chronic granulomatous infection like actinomycosis given.
Histopathology revealed actinomycosis.
Primary actinomycosis of thumb is very rare site as most commonly involved site is a foot (Madura foot).

It is a chronic granulomatous disease caused by the bacteria Actinomycetes (Actinomycetoma) (60%) or Fungi (Eumycetoma) (40%).

Causes

- Actinomycetoma - may be due to
- Actnomadura madurae
- Actnomadura pelletieri
- Streptomyces somaliensis
- Nocardia species

Eumycetoma is often due to Madurella mycetomi
Discussion

Patient comes with triad of clinical findings such as
1. Painless localised swelling
2. Sinus tracts
3. Production of grains or granules (compromised of aggregations of the causative organism) within the sinus tracts.
- The organism is inoculated traumatically through soil with a sharp object like thorn.
Imaging

• Plain x-rays – to assess evidence of bone involvement
• CT-Scan – to detect early bone changes, cortical thinning due to external compression, lytic lesions and changes of osteomyelitis.
• USG- multiple lesions which corresponds to grains which gives the – “dot in circle sign”.
• MRI scan – better assessment of the degree of bone and soft tissue involvement and to rule out other differential diagnosis of the swelling.
Treatment

Due to slow and relatively painless progression of the disease, it is often diagnosed at an advanced stage.

• Antifungal
• Antibiotics
• Treatment of any secondary infections
• Amputation in severe cases.
Conclusion

The primary Actinomycosis of finger is rare site and clinically a great diagnostic challenge and requires high degree of suspicion for early diagnosis which avoids unnecessary surgery and decreases the morbidity and mortality.

This case highlights the importance of clinical and radiological awareness to consider the rare site for guiding appropriate therapy.
References


Thank You.