

Fusiform swellings of fingers in a 3-year-old girl

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A three-year-old girl presented with complaints of low-grade fever and progressive fusiform swellings of fingers for the past six months. She also had similar swellings in the toes and first metatarsal region in both the feet for three-four months. Her complaints had not responded to parenteral antibiotic therapy. The swellings were red in color but were relatively painless. The affected hand and the radiograph are shown in Figure 1. Additional findings on physical examination, chest radiograph and skin test confirmed the diagnosis. Spot the diagnosis.



Figure 1: The photograph of hand shows fusiform red swellings of third and fifth fingers and the radiograph shows destruction of the corresponding middle phalanges with minimal new bone formation

Answer on page no. 324

Spot the Diagnosis

Answer: Spina Ventosa

The present child had spina ventosa, the tubercular osteomyelitis of small bones of the hands and feet. Her physical examination revealed the presence of generalized lymphadenopathy including matted cervical lymph nodes, bronchopneumonia and hepatosplenomegaly.

The radiograph of the hands and feet showed multiple osteolytic lesions (middle phalanges of middle and little fingers in the left hand, first metatarsals of both the feet and first and fourth proximal phalanges of the left foot) with minimal periosteal reaction [Figure 1]. Chest radiograph showed patchy consolidation in the right upper zone and left lower zone with hilar lymphadenopathy. Mantoux test was positive. These findings confirmed the diagnosis of disseminated tuberculosis with spina ventosa, the tubercular osteomyelitis of small bones. The swellings subsided within six weeks of initiation of anti-tuberculous therapy. The treatment is being continued for a year. Short and bent fingers were the sequels of the lesion.

Discussion

Spina ventosa refers to a form of tuberculous osteomyelitis

where underlying bone destruction, overlying periosteal reaction and fusiform expansion of the bone results in cyst-like cavities with diaphyseal expansion.^[1] The word is derived from Latin (Spina-‘a thorn’; ventosa-‘full of wind, distended’).^[2] It typically involves phalanges, metacarpal and metatarsal bones in children. Though tuberculosis is a common disease in India, spina ventosa is a rare manifestation.

The characteristic findings include the slow progression of the disease, minimal pain despite the fusiform swelling, minimal new bone formation. Similar lesions can be encountered with acute osteomyelitis, dactylitis of sickle cell disease, syphilis, hereditary acro-osteolytic conditions, histiocytosis X and bone tumors. However, the classical lesion, associated lymphadenopathy, primary lung lesion, positive mantoux test and response to anti-tubercular therapy confirmed the diagnosis in this case.

References

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