

Infantile Scurvy

A 21-month-old girl with global developmental delay and failure to thrive presented with painful swelling of the right leg for 4 days. Examination revealed tender swelling (**Fig. 1a**) and restricted movements of right leg. Costochondral rosary and hemorrhagic gums were also noted. Lower extremity radiographs (**Fig. 2**) showed findings typical of scurvy. Treatment with oral vitamin C led to rapid improvement.



(a)



(b)

FIG. 1 Diffuse (tender) swelling of right leg above knee (a); and . Costochondral beading of ribs (b).



FIG. 2 Lower extremities radiograph showing (a) ground glass appearance of the bones; (b) pencil-thin cortices; (c) white dense line of metaphyseal calcification - Fraenkel's line; (d) an adjacent radiolucent band - Trummerfeld zone; (e) lateral metaphyseal beaking - Pelkan spur; and (f) central rarefaction with peripheral calcification of epiphyses - Wimberger sign.

Infantile scurvy results from lack of intake of vitamin C rich foods such as fresh fruits and vegetables. Affected infants present with irritability, failure to thrive, swollen and painful extremities with restriction of movements (pseudoparalysis), frog posture, gum bleeding, and scorbutic rosary. Characteristic radiological findings and rapid response to treatment with vitamin C confirms the diagnosis. Differential diagnoses include traumatic injury, septic arthritis/osteomyelitis, hemophilic hemarthritis, congenital syphilis, leukemic infiltration and other painful conditions. Costochondral beading may suggest the diagnosis of rickets but rachitic rosary is round and non-tender, while rosary in scurvy is sharp and tender. All these conditions can generally be distinguished by the presence of associated clinical features such as fever, rash, or trauma. Ancillary investigations and radiography help in confirming the diagnosis.

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