

## Swollen foot revealing scurvy

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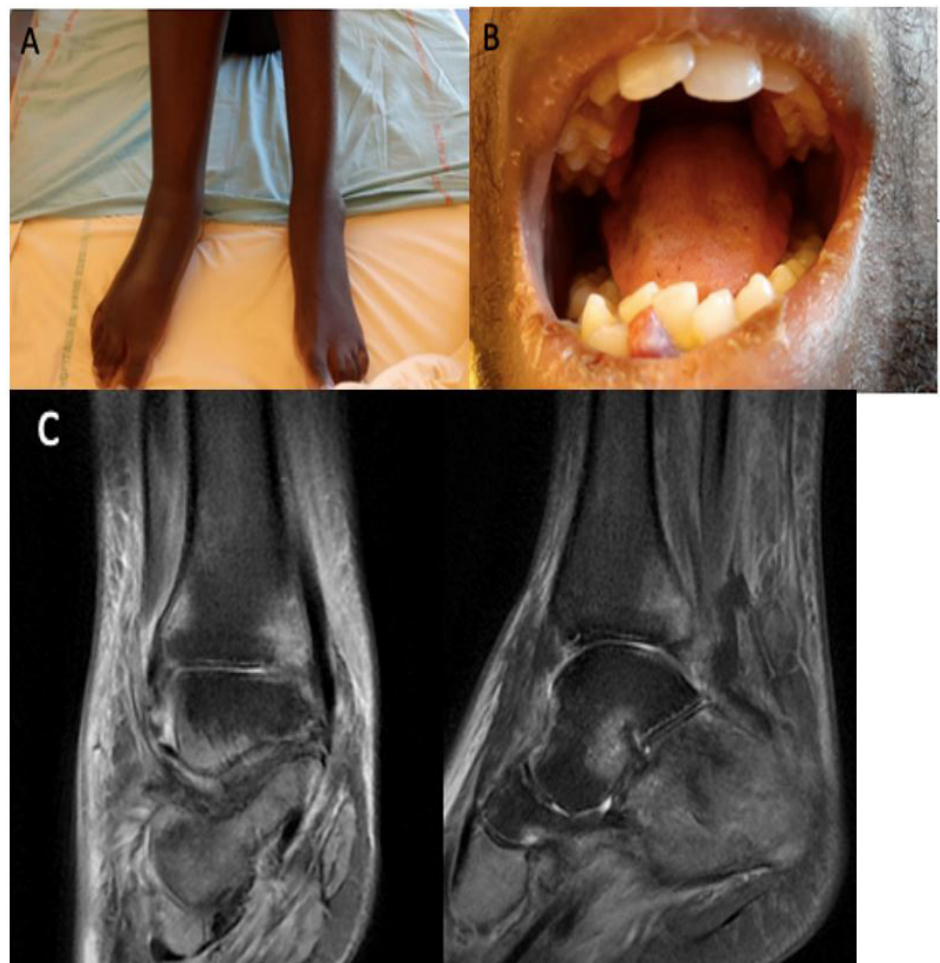
Scurvy, vitamin-C.

### Clinical Image

A 21-year-old man was referred to our rheumatology department for spontaneous progressive pain of the right foot and leg with lameness. At birth, he experienced neonatal hypoxemia with right hemiparesis sequelae. He recently complained of severe asthenia, anorexia and loss of 4 kg. On clinical examination, his leg and foot were swollen and tough on palpation. He had gingival hypertrophy with discrete bleeding. The rest of the physical examination was normal.

The pain became worse after the introduction of curative anticoagulation treatment for suspected phlebitis.

Blood tests showed recent, severe microcytic anaemia (7g/dL, from 11g/dL 2 months earlier), iron deficiency, elevated C-reactive protein level and vitamin D deficiency (< 10 ng/mL, N 30-70).



**Figure 1** : A : Swollen right foot , B : gingival hypertrophia , C : T2 MRI sequence of the foot showed T2 hypersignals on tarsi and periosteal apposition

MRI of the foot showed T2 hypersignals on tarsi and periosteal apposition but no arthritis or synovitis. CT scan of the foot and leg did not show bone or soft-tissue abnormalities.

After further questioning, the patient reported a restrictive diet since he was a child, eating only rice or pasta and fish. On blood testing, vitamin C was undetectable, which confirmed the diagnosis of scurvy that had led to a severe hematoma responsible for the swollen leg and foot and anaemia. After oral vitamin C supplementation (500 mg twice a day), the first clinical improvement appeared within 4 days, with regression of anorexia and asthenia, decrease in pain and swelling and normalisation of the gingival state.

### Discussion

Vitamin C, found in fruits and vegetables, is an essential nutrient for humans, who are not able to synthesize it (1). Main symptoms, due to impaired collagen are mucocutaneous manifestations: perifollicular purpura, follicular hyperkeratosis, bruising, coiled hair, gingival hypertrophy. Periosteum and muscle bleeding are responsible of myalgia, arthralgia and hemarthrosis (2) Collapsed vitamin C blood concentrations make the diagnosis.

MRI can show periosteal reaction with subperiosteal haemorrhage and soft tissue swelling, and sometimes increased T2 signal in marrow cavities of the metaphyses (3). The treatment consist on oral vitamin-C supplementation.

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