

# Dental fluorosis: two case reports

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## **Abstract:**

Two case reports from a high fluoride (10 ppm) rural community. They presented with severe degrees of dental fluorosis, hyper-sensitivity of teeth and skeletal fluorosis all arising from the ingestion of high amount of fluoride in water over a long period of time. Both cases had deformities of the upper and lower limbs. However, the deformities were more pronounced in the lower limbs than in the upper limbs, resulting in knock knee. Radiological finding showed osteosclerosis of the axial bones while the appendicular bones exhibited osteoporosis. There was marked change of bone structure observed as osteomalacia, and coarse trabecular bone pattern. Osteoporosis was also associated with cortical thinning. Periosteal bone apposition was observed in the bones: and genu valgum of the limbs. Biochemical tests revealed normal values for serum calcium and inorganic phosphate. However, the serum alkaline phosphatase was elevated. This may be an indication of a pathological condition where there are possible compensatory mechanisms to maintain normal levels of serum calcium and inorganic phosphate. One case which had undergone corrective surgical intervention of the lower limbs four years earlier, had continued to live in the same environment using drinking water with 10 ppmF after corrective surgery, and showed no improvement.