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## Pamidronate Lines

*Figure 1* is a radiograph of the left lower limb of a two-year-old child. It demonstrates multiple linear areas of increased bone density at the metaphysis of the proximal and distal femur and circumferential linear thickening of the cortex around the iliac with background osteopenia and a non united fracture of the shaft. He was diagnosed as having Osteogenesis Imperfecta (OI) type 3 in early infancy and was given cyclical Pamidronate therapy for the same. It is likely that the areas of increased bone density correspond to the timings of the Pamidronate infusions.

There has been an increase in the usage of Biphosphonates like Pamidronate to enhance bone density in various disorders associated with osteopenia including osteopathies such as OI, juvenile osteoporosis, Gaucher's disease, hyperphosphatasia, juvenile chronic arthritis and glucocorticoid-induced osteoporosis. They have also been tried for treatment of calcinosis associated with myositis, fibro-dysplasia ossificans, dermatomyositis and scleroderma. Increased bone density, cortical width, reduced fracture rates and improved bone pain are known benefits from Pamidronate therapy in OI(1). A reduced rate of bone turnover due to decreased osteoclast activity is thought to result



*Fig.1. X-ray showing multiple linear areas of increased bone density in a child on cyclical pamidronate therapy.*

in a better balance between bone formation and resorption leading to an increase in bone mass. The lines of increased bone density are likely to be the result of an increase in both the number of trabeculae and the amount of residual calcified cartilage within the secondary spongiosa(2). This radiographic appearance is striking and will probably be seen more commonly with expanding indications for Biphosphonate therapy in the future, Other conditions where multiple dense transverse bands extending across the metaphysis of long bones are seen include chronic lead poisoning and in chronic disease or stress related to malnutrition in which case they are referred to as growth arrest lines.

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### **Nephrotic Syndrome in a Girl with Filariasis**

Filariasis causing nephrotic syndrome is rare and reported only in adults but not in pediatric age group(1). We report here an interesting case of a girl with nephrotic syndrome secondary to filariasis. A ten-year-old girl was admitted with generalized body swelling and decreased urine output for one month. There was no history of hematuria or dysuria. On examination she had anasarca and her blood pressure was normal. She had a distended abdomen due to ascites and grossly edematous lower limbs. Investigations revealed the following: Hb 12 g%, TC 5000/cu mm, DC - N 62% E 12% L 26%. Serum analysis showed Urea 32 mg/dL, total protein 3.9 g/dL, albumin 1.1 mg/dL, and cholesterol

498 mg/dL. Urine examination revealed massive proteinuria, normal microscopy and absence of chyluria. In view of eosinophilia and longstanding pedal edema, filariasis was considered. Peripheral smear was positive for microfilaria and filarial serology was also strongly positive by indirect hemagglutination. She was treated with diethyl-carbamazine for 3 weeks and she went into remission after 10 days.

In this child with filariasis, all the criteria for nephrotic syndrome namely edema, proteinuria, hypoalbuminemia and hyperlipidemia were present. A remission induced by antifilarial therapy also supports the filarial etiology for nephrotic syndrome. Nephritis due to microfilaria has been postulated as a possible mechanism for the development of nephrotic syndrome(2). Chyluria due to Bancroftian filariasis leading to hypo-albuminemia is documented in literature(3). The absence of