

## CASE REPORT: METAPHYSEAL BANDS IN OSTEOGENESIS IMPERFECTA

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**Introduction:** Osteogenesis imperfecta, a hereditary genetic disorder caused by decrease amount of normal Type 1 collagen. Osteogenesis imperfecta ranging from mild to severe form. A 2 years old boy with a strong family history of osteogenesis imperfecta, presented with spontaneous intrauterine left femur fracture. He was diagnosed with osteogenesis imperfecta type 3. Subsequently, intravenous pamidronate started since December 2018, repeated at interval of three months. He had undergone 5 cycle of Pamidronate. He has typical features of osteogenesis imperfecta. X ray over bilateral lower limb was done, revealed transverse sclerotic band at distal femur and metaphysis of proximal tibia with bone deformity of both tibia and femur.

**Discussion:** Bisphosphonates has significantly reduced the incidence of fractures and deformity in patients with osteogenesis imperfecta. With increasing use of bisphosphonate, multiple reports of abnormal radiological findings in the growing skeleton. Sclerosis of the epi-, apo- and metaphyseal areas of the appendicular and axial skeleton due to the administration of nitrogen containing bisphosphonates, with band-like areas of increased opacity in the growing bones. Mostly marked in the distal metaphysis of the femur and proximal metaphysis of the tibia. Osteoclastic activity is inhibited during pamidronate therapy, this results failure of remodelling of the primary spongiosa into secondary spongiosa in the physis. Further growth of physis form the bands termed "zebra lines". The bands depend on the number of doses of intravenous pamidronate, the frequency and the growth of the child. It corresponds to number of cycles of treatment. Zebra lines appear as early as 2 months after the first treatment and the bands stop appearing after physeal closure, even if therapy is continued..

**Conclusion:** Intravenous Pamidronate has significantly improved the patient's quality of life by reducing the incidence of chronic bone pain and fractures.