

(Refer to page 33)

Answer: Harris growth arrest line

These were first described by Dr H Harris in 1927¹ and are seen as radiopaque transverse lines in the metaphyses of the long bone most commonly in the tibia. The other commonly studied sites are distal radius and vertebrae.²

These lines result from period of temporary osseous growth arrest followed by resumption of growth during periods of stress on the developing bone. These may be seen in varied conditions ranging from malnutrition and other illnesses (growth hormone deficiency, hypothyroidism, hypoparathyroidism to behavioural disturbance and psychosocial stress.²

The growth arrest line is described as originating from osteoblasts which are deprived of longitudinally arranged cartilage

matrix and instead continue their activity on the horizontal template on the undersurface of the epiphyseal growth plate.³ Histologically, the trabeculae above and below the growth arrest line are normal but across the growth arrest line, there is lack of lamellar appearance and osteophyte lacunae.⁴

The length wise growth of the long bone is known to adopt in the long term with the disappearance of these lines in most cases while some studies have reported children with growth arrest lines to be shorter compared to children with no such lines.²

While some authors have proposed these as indicators of health, nutritional status and living conditions of individuals and population in general, others have found no correlation between Harris growth arrest lines and illnesses.²

REFERENCES

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 - 4: Miszkiewicz JJ. Histology of a Harris line in a human distal tibia. *J Bone Miner Metab* 2015; 33:462-6.
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