Clinical Image

Beau’s lines: a rare cause

Satyam Singh Jayant, Rimesh Pal, Pinaki Dutta

Department of Endocrinology, Post Graduate Institute of Medical Education and Research, Chandigarh, India

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A 25-year-old gentleman presented with recurrent episodes of generalized tonic-clonic convulsions for the past eight months. For the same, he was evaluated at a local hospital. A non-contrast computerized tomography of the head was done which was unremarkable and he was started on phenytoin and valproic acid. However, his seizure frequency increased and he subsequently presented to our institute. Physical examination revealed positive Chvostek sign and positive Trousseau sign [Figure 1A].

![Figure 1](https://www.theinternationalmedicine.com)

**Figure 1.** A) Clinical photograph demonstrating carpopedal spasm (Trousseau sign), B-C) Clinical photograph showing Beau’s lines (marked in arrowheads) and brittle nail (C).

Address for Correspondence: Rimesh Pal, Department of Endocrinology, Post Graduate Institute of Medical Education and Research, Chandigarh, India-160012. E-mail: rimesh.ben@gmail.com

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There were transverse grooves over all his nails and toes, suggestive of Beau’s lines [Figure 1B, marked in arrowheads]. In addition, there were spontaneous cracks in his nails suggestive of brittle nails [Figure 1C]. The rest of the physical examination was unremarkable. Investigations revealed hypocalcemia (corrected serum calcium 6.2 mg/dL), hyperphosphatemia (serum phosphate 5.6 mg/dL), normomagnesemia and low serum intact parathyroid hormone level (iPTH < 1.2 pg/mL). Accordingly, a biochemical diagnosis of hypoparathyroidism was made. Work-up for polyglandular autoimmune syndrome type I was non-contributory. There was no prior history of neck surgery or irradiation. He was started on oral calcium and calcitriol supplements. He was gradually taken off all anticonvulsant medications and is presently seizure-free.

Beau’s lines are transverse ridges/grooves originating under the proximal nail fold. They develop due to any stress that temporarily halts the nail growth and clinically manifests several weeks after the occurrence of the insult. The width of the grooves usually correlates with the duration of the insult. Hypoparathyroidism and consequent underlying hypocalcemia are a cause of Beau’s lines affecting all the 20 nails of fingers and toes [1]. In addition, brittle nails are a feature of hypoparathyroidism as well [2]. Although nails contain calcium at a low concentration (0.03%) [3], hypocalcemia can lead to cessation of nail growth, causing Beau’s lines.

Conflict of interest
The authors declare no conflict of interest.

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References