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Letter to Editor

Reflections on brachyonychia: Insights and observations

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Dear Editor,

A 22-year-old man presented to the dermatology clinic with concerns about abnormal nail and toe appearance. He reported that these changes had been present for as long as he could remember. His nails had always appeared shortened, without any associated pain or functional difficulties. There was no history of trauma or systemic illness. Additionally, the patient noted that the appearance of his toes was peculiar, particularly the 4th and 5th toes on both feet, which seemed to be shorter than normal. There was no history of onychotillomania and onychophagia. There was no significant medical history or any history of systemic disease. Also, there was no significant family history of similar nail or skeletal abnormalities and no known genetic disorders in the family.

On examination, all fingernails and toenails had brachyonychia, a condition identified as brachyonychia. The nails appeared to be shorter than the distal phalanx of each digit [Figures 1 and 2]. There was no evidence of discoloration, pitting, or other nail abnormalities. The 4th and 5th toes of both feet exhibited brachydactyly. The deformity was symmetrical and present on both feet [Figure 3]. No other bony abnormalities were noted in the patient.

On investigation, his parathyroid hormone (PTH), serum Vitamin D_3, thyroid-stimulating hormone (TSH), T_3, T_4, calcium, phosphorus and creatinine levels were normal. No specific genetic tests were performed at this visit. The X-ray of bilateral feet showed decreased length of phalanges of 4th and 5th digits of both feet. The clinical findings of brachyonychia affecting all fingers and toes, along with brachydactyly (shortened 4th and 5th toes) on both feet, suggest a possible congenital or genetic condition.

Racquet nail or brachyonychia was described by DuBois (1926) as a short, broad and flat nail plate with an altered shape resembling that of a tennis or squash racquet resulting

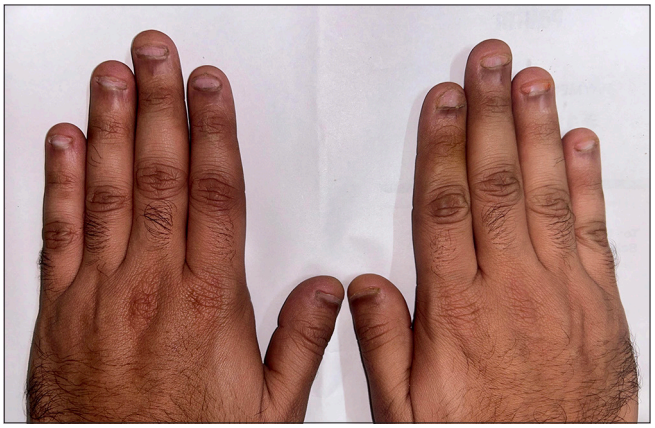

Figure 1: A 22-year-old male with brachyonychia involving all finger nails.

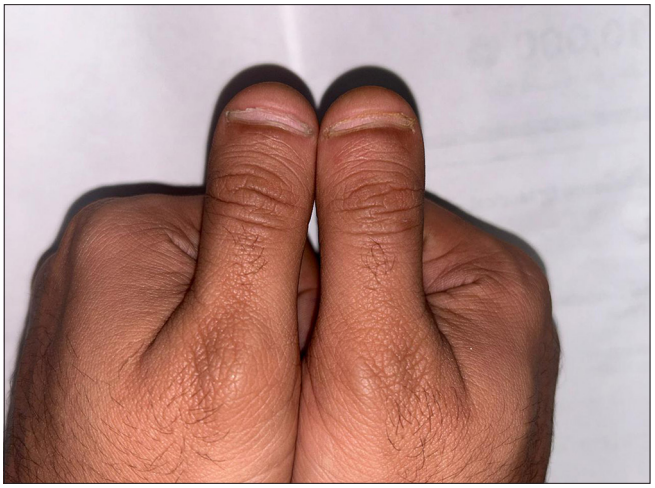

Figure 2: Close up of the patient's thumbs showing shortening of nail plate.

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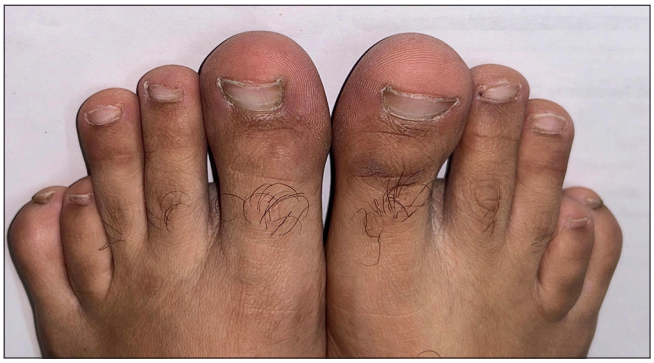

Figure 3: Bilaterally symmetrical brachydactyly of 4th and 5th toes and brachyonychia of all toenails.

from underlying bone and soft-tissue abnormalities of the terminal phalanges.[1,2] It is a benign condition but can be genetic and acquired. The former is thought to result from alterations in the cartilage, which could include early closure of the cartilaginous line of the terminal phalanx, as suggested by Burrows, or obliteration of cartilage, as suggested by Oluf Thomsen.[3] Hyperparathyroidism is the main cause of the acquired type of brachyonychia, according to Baran *et al*.[4] Numerous conditions, such as malabsorption, rickets, osteomalacia, and chronic renal failure, maybe the cause of this condition.[5] Brachyonychia and brachydactyly have been documented in a case of Bardet-Biedl syndrome, an autosomal recessive multisystem disorder characterised by a range of clinical features, including obesity, retinal degeneration, and renal anomalies.[6]

Our case highlights the importance of a thorough evaluation for patients presenting with unusual nail and skeletal abnormalities. A multidisciplinary approach involving dermatology, orthopaedics, and genetics will be crucial in the accurate diagnosis and management of this patient's condition. Further investigation into potential genetic syndromes and their implications will be essential in providing comprehensive care.

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