

Short Communication

Muehrcke's lines of the fingernails in a patient with normal serum albumin level: an idiopathic variation

Sir, a 22-year-old man presented with asymptomatic parallel white lines on his fingernails for two months (**Figure 1**). He had developed these lines one month after an explorative laparotomy due to abdominal pain. He had history of appendectomy five years earlier. The exploration revealed multiple adhesion bands with colonic node enlargement due to follicular hyperplasia. Patient was not on any medication and any problems. There was no history of trauma. Physical examination revealed paired white transverse lines on all the fingernails which disappeared with pressure. Toenails were normal. Physical examination of other organs as well as pertinent laboratory studies revealed no abnormalities. Liver function tests including the serum albumin were within the normal range.

Muehrcke's lines are paired, white, transverse lines due to an abnormality in the vascular bed of the fingernails; they typically appear on the second, third, and fourth fingernails.¹ Muehrcke first described those lines in a series of 65 patients with severe, chronic hypoalbuminemia.² They are commonly associated with hypoalbuminemia due to liver or renal pathologies and may resolve when serum albumin is raised to above 2.2 g/100 mL.^{1,2} The exact pathogenesis is not fully known; pressure on the underlying vasculature due to edema of the nail bed may cause blanching typically seen through the nail plate. Various disorders have been



Figure 1 Muehrcke's lines paired transverse white bands on the fingernails.

Table 1 Diseases associated with the Muehrcke's lines.

Disease	Reference
Hypoalbuminemia	Muehrcke, 1956 [1]
Renal failure	Hudson and Dennis 1966 [2] Udayakumar <i>et al.</i> 2006 [6]
Chemotherapy	Schwartz and Vickerman 1979 [7] James and Odom, 1983 [3] Modesto dos Santos <i>et al.</i> 2005 [8] Dasanu <i>et al.</i> 2006 [9] Chen <i>et al.</i> 2006 [10]
Trauma	Feldman <i>et al.</i> 1989 [5]
Heart transplantation	Nabai, 1998 [11]
Placement of a left ventricular assist device (congestive heart failure)	Alam <i>et al.</i> 2001 [4]

associated with Muehrcke's lines (**Table 1**). Presence of Muehrcke's lines in patients with normal serum albumin levels who are receiving chemotherapy is well documented.³ They have also been reported following heart transplant.⁴ Additionally, Muehrcke lines have been reported after trauma.⁵ Our case represents a subtype of

patients with Muehrcke's lines with normal serum albumin that can be categorized as idiopathic.

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