

Half and Half Nails in a Healthy Person

Half and half nails or Lindsay's nails were first mentioned by Bean (1) in 1964 and later described by Lindsay (2) in 1967 in patients with chronic kidney disease. They can occur in various diseases but also in healthy individuals.

A 57-year-old patient with no significant pathological personal history consulted us for discoloration of all his nails on the fingers (Figure 1) and toes (Figure 2). The change in color occurred 17 years ago and had persisted since. The patient had no significant family history and denied a longer period of consumption of drugs, tobacco, or alcohol. On clinical examination, we found whitish discoloration of the proximal half of all nails (50% of the area), whereas the distal half was red-brown with a sharp demarcation line to the proximal half. The difference in color persisted despite nail growth, and did not change when applying vertical pressure on the nail plates. The patient refused nail biopsy. Hematological and biochemical laboratory examinations, urinalysis, thyroid function, and antinuclear antibodies were all in the normal range. Direct mycological examination performed with potassium hydroxide was negative, and Sabouraud cultures were sterile.

Half and half nails or Lindsay's nails is a systemic onychopathy, clinically characterized by a white coloring of the proximal half nail and a red-brown coloring of the distal half of all the nails. The two discol-

orations of the nails are always well-defined, do not disappear under pressure, and there is no tendency to change the configuration with the growth of the nail. The change may affect one or all nails of the fingers and toes. In general, the distal portion of the nail occupies 20-60% of the nail's surface (3). Some authors identify the half and half nail syndrome with Terry syndrome, although in this syndrome the distal band is less than 20% of the total length of the nail.

Half and half nails are seen in 20-50% of patients with chronic kidney disease (4), but may also occur in Crohn's disease (5), Behçet's disease (6), pellagra citrullinemia (7), Kawasaki disease, cirrhosis, and even in healthy persons (8).

Histologically, the proximal white band is considered to be caused by chronic anemia secondary to increased wall thickness of capillaries or overgrowth of connective tissue between the nail and the bone with the reduction of blood in the subpapillary plexus. The distal brown band is caused by melanin deposits (9). The mechanism of occurrence of half and half nails is unclear; there is no correlation between the percentage of brown coloration of the nail and the severity and duration of chronic renal disease. Hemodialysis does not cause improvement in the nail changes, but they can improve or disappear after kidney transplantation (4).

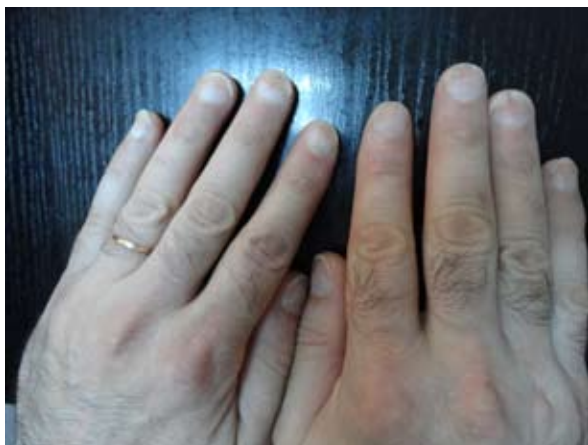


Figure 1. Clinical appearance of half and half nails on fingers.



Figure 2. Clinical appearance of half and half nails on toes.

The present patient falls in the group of healthy individuals with half and half nails syndrome affecting all the nails on the hands and toes without finding a triggering cause. The diagnosis was made by clinical examination. The manifestation of half and half nails syndrome in healthy patients raises the possibility of a genetic susceptibility to the disease.

Half and half nails is a condition commonly found in patients with chronic kidney disease, but it can also be found in the context of other diseases as well as in healthy individuals.

References:

1. Bean WB. Nail growth: a twenty-year study. Arch Intern Med. 1964;111:476-82.
2. Lindsay PG. The Half-and-Half nail. Arch Intern Med. 1967; 119:583-7.
3. Harrison S, Bergfeld WF. Diseases of the hair and nails. Med Clin North Am. 2009;93:1195-209.
4. Khanna D, Singal A, Kalra OP. Comparison of cutaneous manifestations in chronic kidney disease with or without dialysis. Postgrad Med J. 2010;86:641-7.
5. Pellegrino M, Taddeucci P, Mei S, Peccianti C, Fimiani M. Half and half nail in a patient with Crohn's disease. J Eur Acad Dermatol Venereol. 2010;24:1366-7.
6. Sachin AA, Kalyoncu AF, Selçuk ZT, Cöplü L, Celebi C, Baris YI. Behcet's disease with half-and half nail and pulmonary artery aneurysm. Chest. 1990;97:1277.
7. Cakmak SK, Gönül M, Aslan E, Gül U, Kiliç A, Heper AO. Half-and-Half nail in a case of pellagra. Eur J Dent 2006;16:695-6.
8. Verma P, Mahajan G. Idiopathic "Half and half" nails. J Eur Acad Dermatol Venereol. 2015;29,1439-54.
9. Leyden JJ, Wood MG. The "Half-and-Half nail". Arch Dermatol. 1972;105:591-2.

**Alexandru Oanță, Veronica Iliescu,
Smaranda Țărean**

SC Dermamed SRL Private Clinic, Brasov, Romania

Corresponding author:

Veronica Iliescu, MD
Zizinului street no. 40
Brasov
Romania
veronica.iliescu1@gmail.com

Received: November 14, 2016

Accepted: August 20, 2017