

Longitudinal Leukonychia Associated with Hydroxyurea

Iain Noel M. Encarnacion, MS, Luis J. Borda, MD, Robert J. Pariser, MD
Department of Dermatology, Eastern Virginia Medical School, Norfolk, VA

Introduction

Nail ridging, partial leukonychia, and longitudinal melanonychia have been described as adverse reactions to hydroxyurea; however, to our knowledge, longitudinal leukonychia has not been previously reported^{1,2}. We report a case of longitudinal leukonychia (leukonychia striata) seemingly linked to hydroxyurea exposure.

Case

A 74-year-old man presented with an approximately 1-year history of bilateral white fingernail discoloration, most notably on right 3rd and 4th fingernail. He was under treatment for myelodysplastic syndrome with hydroxyurea 500mg BID for 18 months. Physical exam revealed longitudinal white and pigmented bands on bilateral fingernails and toenails, more pronounced on the right 3rd and 4th fingernail (**Figure 1**). A clinical diagnosis of leukonychia striata was made. The patient was counseled that hydroxyurea could be associated with his nail changes and hydroxyurea dose was decreased by his oncologist to 500mg BID alternating with 500mg QD, leading to gradual improvement of leukonychia striata.

Case (continued)

At 1-year follow-up, the leukonychia was significantly improved, while the longitudinal melanonychia continued to persist (**Figure 2**).



Figure 1: Longitudinal white bands on bilateral fingernails and toenails (right 3rd and 4th fingernails being more evident).



Figure 2: Longitudinal pigmented bands on the bilateral fingernails and toenails. Note the more evident improvement of longitudinal leukonychia on the right 3rd and 4th fingernails.

Discussion

Longitudinal melanonychia and nail ridging with atrophy have been associated with hydroxyurea treatment. However, leukonychia has been rarely reported. Nail changes caused by hydroxyurea treatment typically manifests after several months of therapy, though it has been documented to appear as soon as 4 months into treatment or as late as 5 years into hydroxyurea therapy^{3,4}. While the exact cause of these changes remain uncertain, various theories have been proposed, including hydroxyurea's toxic effect on the nail bed and genetic predisposition^{5,6}. This case indicates that dermatologists should keep longitudinal leukonychia within the spectrum of nail alterations associated with hydroxyurea therapy.

References

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