

Nail transverse white bands induced by antileukemic chemotherapy

A 48-year old woman affected by acute myeloid leukemia received a sequential combination of idarubicin and cytosine arabinoside as induction and consolidation therapy. After each course, transverse white bands appeared on all ten fingernails, and migrated distally as a result of nail plate growth. The temporal relationship between the white lines and drug administration is clearly shown in the figures: the distal band corresponds to the induction phase, and the more proximal band to the consolidation phase. These abnormalities (also called transverse striate leukonychia) were first described in the nails of patients suffering from arsenic and thallium intoxication, and subsequently in those affected by a variety of medical diseases such as myocardial infarction, acute and chronic renal failure, kidney allograft rejection, systemic lupus erythematosus or immunohemolytic anemia.^{1,2} They also have been frequently reported in patients receiving anti-cancer chemotherapeutic agents,¹⁻⁶ but rarely in leukemic patients. Although they are not associated with any specific drug class, cyclophosphamide, doxorubicin and vincristine are the most frequently involved agents.³ The literature is uncertain as to the exact pathogenetic mechanism of nail transverse white bands. In the case of combination chemotherapy, they may be due to an injury affecting the mitotically active cells of the nail matrix that leads to an alteration in nail plate cheratinization.^{1,4,5}

As in our case, nail transverse white bands may provide a biography of a patient's chemotherapy.⁶

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