

Iatrogenic Blue-Grey of the Nails Caused By Hydroxyurea

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ABSTRACT

With the may number of anti-cancer medications, some are with at home, with all the possibility of potential side effects from such medications. Manifestations of muco-cutaneous, and nail, are rarely considered severe. Hydroxyurea is a well-tolerated oral chemotherapeutic drug often used to treat myeloproliferative neoplasms, including essential thrombocytosis. After initiation of Hydroxyurea for treatment of essential thrombocytosis, we report a patient's case has a blue-grey pigmentation of the nails.

A 36-year-old woman who had been on Hydroxyurea 1,500 mg once daily and aspirin 81 mg daily for one month followed in onco-hematology for critical thrombocytosis, then consulted on the treatment of the painful diffuse pigmentation of the twenty fingers. The clinical examination showed a patient in good general health and the dermatological examination revealed normal blue-gray homogeneous pigmentation affecting the proximal half of the fingernails and toenails. The nails were not thickened and brittle without onycholysis and the skin around was fine. Inflammation swelling, pain, tenderness, or other symptoms were not stereotypical. The analysis of dermoscopy reported a homogeneous blue-gray hue. The patient was treated with photoprotected nail cream, with a slight increase. But we continued Hydroxyurea therapy, because the patient had a high plaque count.

Some chemotherapeutic agents, most notably cyclophosphamide, platinum agents and doxorubicin are known to induce mucocutaneous hyperpigmentation. This is an antimetabolite and exerts its antitumor function by inhibiting the ribonucleotide reductase enzyme and thereby inhibiting the synthesis of DNA. Although Hydroxyurea is a well-tolerated agent, skin toxicity such as oral aphthosis, skin ulceration and mucocutaneous dyschromia is known. Nail discoloration caused by hydroxyurea may be transverse, longitudinal or diffuse, the most common being longitudinal discolouration.

They may be triggered as a result of photo-sensitivity, of the phototoxic type; that they are primarily caused by UVA exposure, which in about 15 percent of cases needs interruption of treatment. The mechanism of hyperpigmentation induced by HU is not clearly understood, but is hypothesized to be due to HU activation of melanocytes which leads to increased melanine. Some cases of blue-grey pigmentation are identified as the secondary and unusual nail damage and are often overlooked by doctors. This exposes the patient to these iatrogenic dangers, due to the lack of preventive and hygiene measures explained by the patient's doctor. The peculiarity of our article is that most cases show a diffuse melanonychia but rarely defined and grey-blue appearance of the nails.

Hydroxyurea (HU) is a widely used myeloproliferative neoplasm (MPN) drug, and is usually well tolerated. Cutaneous

(HU) toxicity is well recognized and can be perceived as true manifestations. We record a case of a woman with critical thrombocytosis who had the nails pigmented in a blue-grey. Patients treated with Hydroxyurea always need to be accompanied by photo-protection measures and dermatocosmetic care to ensure their comfort and avoid the risk of treatment interruption.

Keywords: Grey nail; Hydroxyurea; Essential thrombocytosis