



Iatrogenic Blue-Grey of the Nails Caused By Hydroxyurea

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Abstract

Hydroxyurea (HU) is a commonly used medication for myeloproliferative neoplasm (MPN) and is usually well tolerated. Cutaneous toxicity of (HU) is well known and can be seen as veritable manifestations. We report a case of a woman with essential thrombocytosis, who had a blue-grey pigmentation of the nails.

Keywords: Hydroxyurea; Essential thrombocytosis; Grey nail

Abreviation

HU: Hydroxyurea, MPN: Myeloproliferative Neoplasm

Introduction

In view of the increasing number of anti-cancer drugs, some are administered at home, with all the risk of possible side effects caused by these drugs. Muco-cutaneous, and nail manifestations are rarely considered as serious. Hydroxyurea is a well-tolerated oral chemotherapeutic drug frequently used in the treatment of myeloproliferative neoplasms, including essential thrombocytosis [1]. We report the case of a patient has a blue-grey pigmentation of the nails after initiation of Hydroxyurea for the treatment of essential thrombocytosis.

Case Report

A 36-year-old woman, followed in Onco-hematology for essential thrombocytosis who had been on Hydroxyurea 1,500 mg once daily and aspirin 81 mg daily for one month, then she had consulted for the management of painful diffuse pigmentation of the twenty nails. The clinical examination found a patient in good general condition, and the dermatological examination showed a regular blue-grey homogeneous pigmentation affecting the proximal half of the fingernails and toenails (Figure 1), without onycholysis, the nails were not thickened and brittle, and the surrounding skin was normal. There were no features of inflammation swelling, warmth, tenderness or any other abnormalities. Dermoscopy examination confirmed a homogeneous blue-grey coloration (Figure 2). The patient was treated with nail cream with photoprotection, with a partial improvement. But we have continued treatment with Hydroxyurea, because the patient had a high plaque count.

Discussion

Several chemotherapeutic agents are known to cause mucocutaneous hyperpigmentation, most commonly cyclophosphamide, platinum agents and doxorubicin [2]. It is an antimetabolite and exerts its antitumor activity by inhibiting the enzyme ribonucleotide reductase and thereby inhibiting DNA synthesis [3]. While Hydroxyurea is a well-tolerated agent, it is known to have skin toxicity such as oral aphthosis, skin

ulceration, and mucocutaneous dyschromia. Hydroxyurea -induced nail discoloration can be transverse, longitudinal or diffuse, with longitudinal being the most common.



Figure 1: Clinical appearance with grey-blue nails.

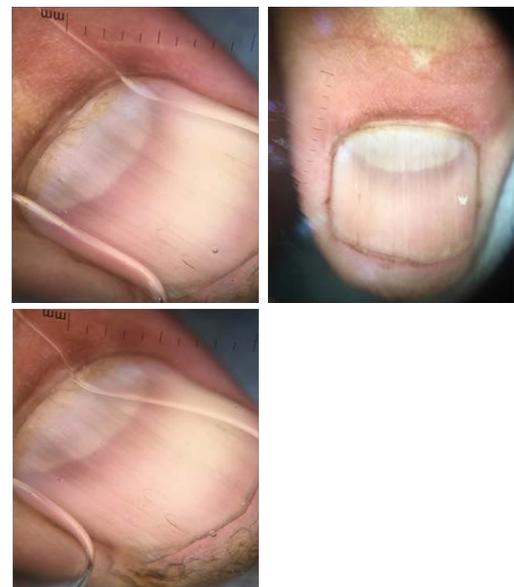


Figure 2: Dermoscopic images: homogeneous grey-blue coloring of the nails.

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They can be induced as a result of photosensitivity, of the phototoxic type; that they are mainly caused by exposure to UVA, which necessitates the interruption of treatment in nearly 15% of cases [3,4]. The mechanism of HU induced hyperpigmentation is not clearly understood, but it is hypothesized to be due to activation of melanocytes by HU which leads to increased melanin. The secondary and rare nail damage, some cases of blue-grey pigmentation are described and that they are often ignored by doctors. This exposes the patient to these iatrogenic risks, due to the lack of preventive measures and hygiene explained by the doctor treating the patient. The peculiarity of our article is that most cases report a diffuse melanonychia but grey-blue appearance of the nails and rarely described.

Conclusion

Patients treated with Hydroxyurea must always be accompanied by photo-protection measures and dermato-cosmetic care in order to ensure their comfort and avoid the risk of interruption of treatment.

Consent

The examination of the patient was conducted according to the Declaration of Helsinki principles.

Conflict of Interest

I declare no conflict of interest

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