A rare cause of melanonychia

Peer review status:
No

Corresponding Author:
Dr. Esther Una Cidon,
Doctor Specialist in Medical Oncology, Oncology Department, Royal Bournemouth Hospital, Castle Lane East, BH7 7DW - United Kingdom

Submitting Author:
Dr. Esther Una Cidon,
Doctor Specialist in Medical Oncology, Oncology Department, Royal Bournemouth Hospital, Castle Lane East, BH7 7DW - United Kingdom

Article ID: WMC004542
Article Type: Case Report
Submitted on: 06-Feb-2014, 10:03:36 PM GMT    Published on: 07-Feb-2014, 11:22:44 AM GMT
Article URL: http://www.webmedcentral.com/article_view/4542
Subject Categories: CANCER
Keywords: Melanonychia, chemotherapy, cancer, toxicity, nails toxicity, subungueal melanoma
How to cite the article: Una Cidon E. A rare cause of melanonychia. WebmedCentral CANCER 2014;5(2):WMC004542
Copyright: This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC-BY), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.
Source(s) of Funding:
None
Competing Interests:
None
A rare cause of melanonychia

Author(s): Una Cidon E

Abstract

Melanonychia is a rare side effect with an unknown etiology mechanism. It is believed that this side effect derives from a damage in the nail bed or matrix, focal stimulation of nail-matrix melanocytes and photosensitization. Many cases secondary to hydroxiurea have been described, though there have been also cases with nail hyperpigmentation secondary to cyclophosphamide or doxorubicin but neither of them complicated with black nails as we show here.

Case Report

A 66-year-old man presented to us with black coloration on the first toenail on both feet without other clinical signs (Figures 1A, 1B and 1C). He referred ongoing nails darkening more remarkable over the previous two weeks, though a brown coloration of the nails had been present since he started his last chemotherapy regimen with oxaliplatin. He had not experienced difficulty putting his shoes on and the patient denied any nail trauma before.

His had a background of pancreatic adenocarcinoma stage IV with multiple liver metastases. He had already received gemcitabine and erlotinib followed by capecitabine as monotherapy after the first evidence of progressive disease. His performance status remained really good, so he was offered a third line of chemotherapy.

His full blood count and biochemistry including liver and renal parameters were normal and the tumoral markers CEA and CA 19.9 had showed a nice decline after his third cycle.

Discussion

Black nail pigmentation has been associated with benign and malignant conditions such as subungual metastases, malignant melanoma or antineoplastic drugs side effects. This condition known as melanonychia describes a black or brown colour of the nail plate caused by the presence of melanin. Despite of its varied etiology, the main goal in the management of this condition is the early diagnosis of malignant causes such as melanoma of the nail matrix and bed also known as subungueal melanoma which is a very serious disease.

Although rare, multiple cutaneous adverse effects have been described with several cytotoxic drugs, however, to our knowledge, no cases of oxaliplatin-induced limited melanonychia have been reported to date in the literature.

Diagnosing melanonychia is usually a difficult task and dermoscopic features might help the physicians in deciding lesions that should have excisional biopsy, but in other cases the clinical course of these lesions could help to conclude a toxic etiology and avoid invasive diagnostic procedures.

Our case showed a clear temporal relation between oxaliplatin and the appearance of this complication and thus, after stopping oxaliplatin (because of a progressive disease, not because of this adverse reaction) this condition started to improve with a complete recovery four months later.

Although all nails can be affected, our patient only had two involved. He had no other side effects of the chemotherapy, and no other mucocutaneous hyperpigmentation or neurological toxicity was observed. At the time of presentation, he was not taking other drugs involved in nail discoloration and had no symptoms relate to disease progression.

Conclusion

Melanonychia is a rare side effect with an unknown etiology mechanism. There have been described many cases secondary to hydroxiurea treatment and although pathogenesis is poorly understood, potential causes include toxicity affecting the nail bed or matrix, focal stimulation of nail-matrix melanocytes, and photosensitization. There have been described also many cases with nail hyperpigmentation secondary to cyclophosphamide or doxorubicin but neither of them complicated with black nails.

The explanation we have to this case is that it is possible that the residual nail toxicity conditioned by pretreatment with capecitabine and the seasonal summer time which promotes walking bare foot could have contributed to the development of melanonychia by stimulation of photosensitivity.
References


Illustrations

Illustration 1

Melanonychia

Figure 1A, Figure 1B, Figure 1C

[Image of a toenail with a melanonychia]