Unusual serpentine supravascular hyperpigmentation during chemotherapy treatment

Houda Mouzount, Sihame Lkhouyaali, Saber Boutayeb, Hassan Errihani

CASE REPORT

A 54-year-old female patient diagnosed for inoperable colic adenocarcinoma with multiple liver metastases in January 2011. She was treated by first line fluorouracil and irinotecan-based chemotherapy in combination with bevacizumab. After three cycles of chemotherapy, a good response to treatment were observed and the patient did not show cutaneous toxicity, the treatment was continued. Two days after the seventh cycle, the patient noticed for the first time asymptomatic pigmentation retracing venous streak of right and left arms, from forearms to shoulders. Clinical examination revealed serpiginous hyperpigmented streaks along the course of the superficial veins (Figure 1 A). There were no apparent leakages of medical agents in surrounding skin and no other mucocutaneous abnormalities. No history of extravasation or phlebitis preceded the hyperpigmentation. No history of extravasation or phlebitis preceded the hyperpigmentation. For this patient, the chemotherapy was suspended and no other treatment was added. After two weeks, we noticed remarkable reduction in hyperpigmented lesions. (Figure 1B) Fluorouracil was replaced by capecitabine. Two months later, this complication was completely resolved.

Figure 1: Serpentine supravascular hyperpigmentation of arms and forearms (A) One day after fluorouracil infusion. (B) After two weeks.

DISCUSSION

Serpentine supravascular hyperpigmentation was first described in 1976 by Hrushesky as an uncommon side effect of intravenous fluorouracil [1]. Other chemotherapeutic agents, such as vinorelbine, fotemustine, and docetaxel, have also been found to cause serpentine supravascular hyperpigmentation [2]. In a recent study, skin hyperpigmentation occurred in 26% of patients treated by fluorouracil. However, linear hyperpigmented streaks over the arm veins used for injections without previous erythematous changes have rarely been reported [3]. Its exact mechanism of pigment induction is unknown [4]. Some hypotheses suggest that these cytotoxic drugs cause loss of endothelial integrity. This would permit the leakage of agent from the vessel to the underlying epidermis where it interferes with melanogenesis thus resulting in hyperpigmentation [2, 4]. No specific treatment is recommended. Pigmentation promptly subsides once the offending drug is stopped [4].
CONCLUSION

Serpentine supravenuous hyperpigmentation can be prevented by avoiding peripheral infusion of some chemotherapy agents, especially fluorouracil, by using permanent central-infusion catheter or suggesting oral chemotherapy if possible.

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Conflict of Interest
Authors declare no conflict of interest.

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REFERENCES