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Omeprazole Induced Skin Hyperpigmentation

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Case Report

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ABSTRACT

Omeprazole has been associated with multiple adverse effects including skin reactions but, to date, cutaneous hyperpigmentation has not been described as an adverse effect of this drug. We reported two cases firstly a thirty seven year old patient with a circular pigmented lesion on forearms and genitals after receiving oral tablet of omeprazole. Secondly a fifteen year old female patient developed pigmented patch over her body the patient was taking tablet omeprazole. According to our results, omeprazole itself may induce skin pigmentation.

INTRODUCTION

Proton pump inhibitors (PPIs) are widely used around the world. PPIs the second-most widely sold medication group ^[1]. These medications are very potent suppressors of gastric acid secretion, and are highly effective for the treatment of acid-related gastrointestinal disorders. These are most effective suppressors of gastric acid secretion undoubtedly are the gastric H⁺, K⁺, ATPase inhibitors in gastric parietal cells. By acting specifically on the proton pump, omeprazole blocks the final step in acid production, thus reducing gastric acidity. They are the most effective drugs used in antiulcer therapy ^[2]. PPIs are generally safe and well tolerated, with a side effect rate of approximately 3%. The most common side effects include headaches, dizziness, diarrhoea, constipation and cutaneous reactions ^[3]. At a lesser frequency, PPI use can result in hepatic dysfunction, vertigo, confusion and haematological disorders.

Hyperpigmentation is increased melanin production by existing melanocytes or from the increased proliferation of active melanocytes. Hyperpigmentary skin disorders are defined as 'increased pigmentation of the skin and mucous membranes to the extent that the patient concerned seeks medical advice.' These skin disorders may be classified as epidermal and dermal hyperpigmentation, depending on the location of the pigment ^[4].

Epidermal hyperpigmentation is because of melanin pigmentation and has a brownish hue. Dermal pigmentation is called 'ceruloderma' or 'blue hyperpigmentation' which may either be due to melanin or due to non-melanin pigments.

The incidence of drug induced hyperpigmentation is very variable and depends on the involved medication it varies from isolated cases to up to 25% of patients receiving a given treatment. The true incidence of this pigmentary change is difficult to assess because of lack of direct evidence and/or lack of adequate information provided by the patient about their treatment ^[5].

Omeprazole is a proton pump inhibitor, widely prescribed for the treatment of gastro-oesophageal reflux disease (GORD), peptic ulcer and Zollinger-Ellison syndrome. The most common adverse effects are diarrhoea, skin rashes and headache. On rare occasions it may cause idiosyncratic reactions such as multiform erythema, pancreatitis, arthralgia, myalgia, leukopenia, thrombocytopenia, Stevens Johnson syndrome, interstitial nephritis and hepatotoxicity. The initial dose of omeprazole is 20-40 mg once daily ^[6, 7].

In this study we present two cases of skin hyperpigmentation probably induced by omeprazole. We also review the literature and a case report of skin hyperpigmentation after 2 months of omeprazole treatment initiation was also studied ^[8].

METHODS

Data Source

Data was collected from electronic database VigiFlow which is a web-based individual case safety report (ICSR) management system that is specially designed for use by national centres in the WHO Programme for International Drug Monitoring. Indian Pharmacopoeia Commission (IPC) is the national coordination centre in India which maintains the spontaneous adverse drug reaction (ADR) reporting system under the Pharmacovigilance Programme of India (PvPI). The two cases were extracted during the signal generation from the database.

Case I

A 37-year-old male patient referred to the Dermatology unit of a hospital in India with complaint of circular pigmented lesion on forearms and genitals. On examining he was diagnosed with skin appendages disorder, hyper pigmentation. He was receiving oral tablet of omeprazole for a few days. Since the patient was receiving only omeprazole, the reaction can be attributed due to omeprazole. No treatment was given for the reaction. The reaction was discussed and confirmed by a physician.

Case II

A 15-year-old female referred to the Dermatology department of a hospital, with abnormal pigmented patches over axilla, pubic, breast and scalp. The patient was taking omeprazole 20 mg BD for 10 days. Since the patient was receiving only omeprazole, the reaction can be attributed to omeprazole. The causality assessment was done according to WHO scale and it was found to be unlikely but according to Naranjo's scale it was found to be possible. No treatment was given for the reaction.

RESULTS AND DISCUSSION

Omeprazole is considered a preferred drug for the treatment of gastroesophageal reflux disease, gastric ulcer and acid-related with an excellent safety profile and therapeutic efficacy. It has been reported that omeprazole is highly efficacious for the treatment of gastrointestinal disorders than any other treatment available ^[9]. Maton et al. also showed long term efficacy and safety of omeprazole in gastrointestinal disorders ^[10].

We are now reporting two cases of skin hyperpigmentation induced by omeprazole. Causality assessment of the adverse drug event (ADE) was carried out using WHO-UMC assessment scale and Naranjo's Scale. In case I ADR develop few days after administration of omeprazole, the event was reported serious due to other medically important condition, the outcome of reaction and dechallenge (withdrawal of the drug) information is unclear. The causality assessment was done according to WHO causality assessment scale and it was found to be possible and according to Naranjo's causality assessment it was also found to be probable in this case. But in case II the event was not serious, causality assessment shown that according to WHO causality assessment scale and it was found unlikely and according to Naranjo's causality assessment it was also found to be possible. Dechallenge information is unclear in both the cases.

Since the patients were on omeprazole treatment only and no medical treatment was provided for the reaction occurred in both the cases. The reaction was discussed and confirmed by physicians that it was due to omeprazole.

Omeprazole has been associated with multiple adverse effects including skin reactions but, to date, cutaneous hyperpigmentation has not been described as an adverse effect of this drug.

Ramirez Hernandez et al reported a case showing omeprazole induce cutaneous hyper pigmentation 2006 ^[8] and it was the first case reported for this finding.

Since omeprazole is prescribed for a variety of indications hence there is a need for awareness of the adverse events related to omeprazole treatment to avoid serious complications. Our findings highlight that clinically significant skin hyperpigmentation may occur during the treatment with omeprazole and treating physicians should aware of this phenomenon.

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CONFLICTS OF INTEREST

None.

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