

Case Report

ORAL CHLOROQUINE INDUCED TOXIC EPIDERMAL NECROLYSIS

*RR Bhosale¹, AM Zende¹, AV Patil² and YG Mokase³

¹Department of Pharmacology, ²Skin and VD, ³Paediatrics,
RCSM Government Medical College and C P R Hospital, Kolhapur
Dist- Kolhapur, Maharashtra 416002, India

*Author for Correspondence

ABSTRACT

Toxic epidermal necrolysis (TEN) is the severe form of idiosyncratic drug reaction which results in an extensive loss of the skin with mucous membrane involvement and most commonly precipitated by the administration of medications like anticonvulsants, antibacterials and non-steroidal anti-inflammatory drugs. Here, we report a case of TEN induced by oral chloroquine which was used in treatment of malaria. The patient was managed with antibiotics, corticosteroids and intravenous fluids and recovered well within 21 days.

Key Words: Chloroquine, Drug Reaction, Toxic Epidermal Necrolysis

INTRODUCTION

Cutaneous adverse drug reactions are common, affecting 2-3 percent of hospitalized patients. There is a wide spectrum of cutaneous adverse drug reactions ranging from transitory rash to the potentially fatal TEN (Nayak, 2008). TEN is an uncommon but acute life-threatening idiosyncratic mucocutaneous syndrome characterized by widespread epidermal necrosis followed by epidermal detachment. Many etiological factors have been proposed, but drugs and infections are the most common causes of TEN. Drug-induced TEN is the commonest cause and anticonvulsants, antibacterials and nonsteroidal anti-inflammatory drugs (NSAIDs) are the most commonly implicated agents (Rajagopalan, 2012). Here, we report a case of TEN which was induced by chloroquine.

CASES

A 30-year-old woman presented with severe orogenital ulcerations, bilateral conjunctivitis and cutaneous detachment all over the body. Her pulse was 126/min and was febrile. A detailed past history was taken which revealed that she had been given daily doses of oral chloroquine phosphate as per schedule for treatment of chloroquine sensitive malaria. The day after end of treatment she started developing erythematous rash which progressed to give rise to the present picture (Figure 1).



Figure 1: Toxic epidermal necrolysis - facial involvement

Case Report

On clinical examination, erythematous papular eruptions developed on the trunk with itching, and then progressed to involve the face, extremities and mucous membrane of the mouth. She had difficulty in swallowing due to painful ulcers of the mouth and oropharynx. On ophthalmic examination, there was bilateral severe conjunctivitis but there was no visual impairment. She had greater than 60% cutaneous detachment and was diagnosed as chloroquine induced TEN by dermatologists. The causality assessment of the reaction was 'probable' (score= 7) by Naranjo's ADR probability scale (Naranjo, 1981).

All the hematological, liver function and renal function tests were within normal limits. Chest radiograph revealed no abnormality. She was admitted to a general hospital where she was treated with injections of pheniramine maleate and hydrocortisone hemisuccinate intravenously for 5 days. The oral mucosa was treated with metronidazole gel and chlorhexidine mouth wash. She was treated with various injectable antibiotics during her hospital stay. There was complete recovery after 21 days.

DISCUSSION

Chloroquine is the most successful antimalarial drug, commonly used both for prophylaxis and therapy of malaria. It is well absorbed from the gastrointestinal tract and gets selectively concentrated in the liver, spleen, lung, adrenals and the skin. It is usually given by oral route and can also be given by i.m., s.c., or as slow i.v. infusion. Adverse reactions commonly associated with chloroquine include severe gastritis, headache, difficulty in accommodation, blurring of vision, loss of hearing, toxic psychosis, photosensitive dermatoses and even retinal damage on prolonged use. However, a case of toxic epidermal necrolysis with oral chloroquine has been rarely noted (Beedimani, 2004).

TEN represents one of the most severe forms of cutaneous drug reactions where mortality is up to 30%. There are isolated reports of TEN occurring after oral intake of chloroquine but this drug has not yet been added to the list of most common drugs capable of causing TEN (Rajagopalan, 2012). In present case, there were signs and symptoms of TEN after oral administration of chloroquine. The patient had not taken chloroquine in the past and there was no history of any other drug allergy. No other drugs like paracetamol or oral contraceptive pills were taken. No history of burning sensation on exposure to sunlight was present. Other skin diseases like pemphigus vulgaris and bullous pemphigoid etc. were excluded on clinical grounds. As other probable causes like upper respiratory tract infection, viral infection or malignancy were not present, this is most likely a case of chloroquine-induced TEN.

The aim of this report is to raise the awareness of physicians about this clinically important and life threatening hypersensitivity reaction of chloroquine which is commonly used in treatment of malaria.

REFERENCES

- Beedimani RS and Rambhimaiah S (2004).** Oral chloroquine-induced Stevens-Johnson syndrome. *Indian Journal of Pharmacology* **36** 101.
- Naranjo CA, Busto U, Sellers EM, Sandor P, Ruiz I and Roberts EA (1981).** A method for estimating the probability of adverse drug reactions. *Clinical Pharmacology and Therapeutics* **30** 239-245.
- Rajagopalan S, Kaur S, Dogra S, Shafiq N, Bhalla A, Pandhi P and Malhotra S (2012).** Toxic Epidermal Necrolysis induced by rarely implicated drugs. *Indian Journal of Pharmacology* **44** 272-273.
- Surajit Nayak and Basanti Acharjya (2008).** Adverse cutaneous drug reaction. *Indian Journal of Dermatology* **53** 2-8.