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CASE REPORT

Amiodarone-induced peri-oral photosensitivity

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We describe a 70-year-old Caucasian man with recurrent history of blistering of peri-oral skin during summer months. Following the diagnosis of a phototoxic reaction to Amiodarone, this was discontinued and an alternative drug to control his cardiac arrhythmia was prescribed. His peri-oral lesions rapidly resolved, and there has been no further recurrence. A brief review on photosensitivity and the underlying mechanisms are discussed.
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Keywords: amiodarone; peri-oral; photosensitivity

Introduction

A 70-year-old Caucasian man was referred to us with a 3-month history of blistering of the lips. He had a similar episode a year before.

His medical history revealed hypertension, mild emphysema, exertional angina and breathlessness. He has had two coronary artery bypass grafts, the second 16 years ago. His medication included Losartan 50 mg, Amiodarone 100 mg, Co-Amilofruse 2 tablets, Asprin 150 mg and Diclofenac 50 mg.

On physical examination, the pulse was 80 beats per minute in sinus rhythm, blood pressure 140/70, and jugular venous pressure was not raised. Cardiac examination revealed normal first and second heart sounds with no added sounds or murmurs. Respiratory examination revealed bilateral prolongation and occasional wheeze. There was no evidence of peripheral oedema. A 12-lead ECG showed evidence of an old inferior myocardial infarction. His heart rhythm was stable with Amiodarone.

Clinical examination at this stage revealed only mild angular cheilitis with no oral ulceration. Microbiological swabs did not yield any candidal or staphylococcal colonization. He was reviewed 3 months later in March with no recurrence of symptoms, and haematological investigations including micronutrient status were normal. However, 4 months later in July, at the height of summer, he requested an urgent appointment as the blistering of the lips had recurred (Fig. 1).

On examination, he had a very erosive erythematous exfoliative cheilitis spreading to his peri-oral skin. An autoimmune antibody screen was negative. A diagnostic biopsy of the lip showed slight hyperparakeratosis with a marked chronic inflammatory infiltrate, mainly lymphocytes, beneath the squamous epithelium and also around the blood vessels. A haemorrhagic microvesicle was noted at the junction of epithelium and lamina propria. Immunofluorescence studies showed no localization of immunoglobulins or C3. The conclusion was marked chronic inflammation.

Patch tests were carried out to the European series; all test items were negative except a weak reaction to Balsam of Peru contained in lip salve. This was omitted by the patient in the subsequent months, but no difference to the eruption was noted.

The peri-oral lesion was diagnosed as consistent with Amiodarone phototoxicity. No other known side effects to Amiodarone were however evident. Throughout the period, the patient remained euthyroid, no neurological symptoms were reported, and serum transaminases remained within normal limits. No corneal deposits were found.

A cardiologist opinion was sought before recommending to discontinue Amiodarone. In view of likely photosensitivity in the peri-oral region, the drug was replaced with carvedilol 3.125 mg b.i.d.

The patient was reviewed during the summer months, 6 months after stopping Amiodarone, and reported no further recurrence of the rash around the lips (Fig. 2).

Discussion

Amiodarone is an iodinated benzofuran derivative class II anti-arrhythmic that is highly effective in suppressing ventricular and supraventricular arrhythmias, often providing control where other therapy has failed. It also has numerous side effects that often limit its use. These include a peculiar blue-grey skin discoloration, photosensitivity, hepatitis, thyroid dysfunction, corneal deposits, peripheral

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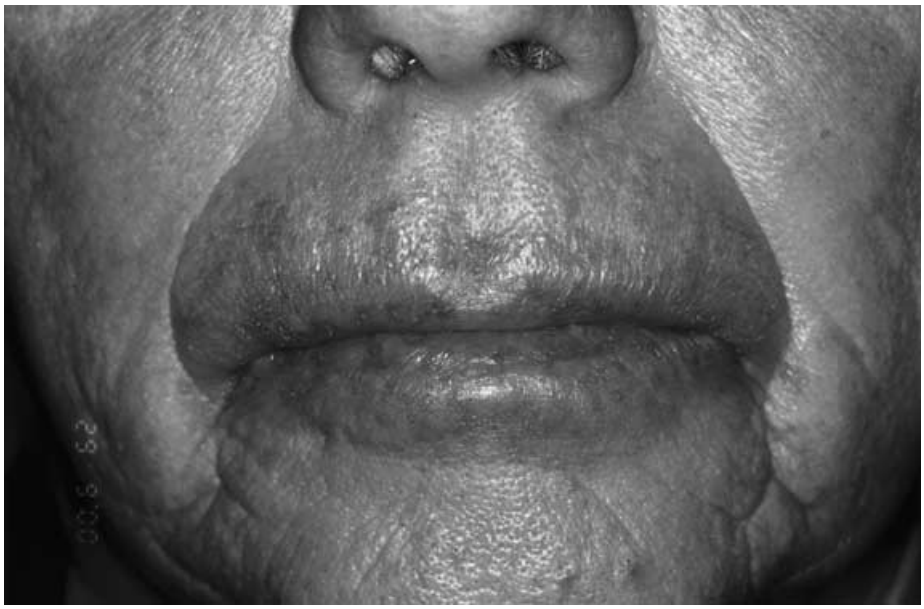

Figure 1 Erythema of peri-oral skin involving the mucocuteanous junction of lips.

neuropathy, sleeplessness, pulmonary fibrosis, bone marrow suppression and drug interactions (1). These side effects correlate with the total cumulative dose, and the majority of adverse reactions resolve with the discontinuation of the drug.

The most common side effect is photosensitivity, with reports of about 50% of patients being involved (2, 3). The symptoms vary from an increasing propensity towards suntan during the summer months to intense burning, erythema and swelling of the sun exposed areas (2). Photosensitivity to drugs occurs both as a phototoxic, non-immunological phenomenon or as a photoallergic, immuno-dependent reaction (4). The latter is primarily caused by IgE-mediated damage to cell membranes. Amiodarone photosensitivity is a phototoxic phenomenon as it has the clinical appearance of sunburn with erythema and oedema. Furthermore, the reaction appears to occur early in the course of sun exposure without an incubation period (5). Photoreactivity wavelengths lie in the long-wave UV-A spectrum between 350 and 380 nm (5). The drug absorbs energy from UV-A light and releases it to the skin, causing cellular damage. The photosensitivity reaction, in contrast to other side effects,

Figure 2 Complete resolution following withdrawal of the drug. Follow-up photograph taken in the heat of the following summer.

does not seem to be dose related (3), and this patient was not formally tested for photosenstivity as a way of predicting risk status.

Our case supports the reversibility of the photosensitivity following withdrawal of Amidarone. Replacement drug carvedilol while acting as an anti-arrhythmic also helps in the control of left ventricular failure. During summer months, patients on amiadrone should be advised to avoid excessive exposure to sunlight and use of prophylactic barrier creams. Clinicians are alluded to the diagnosis based on recognition of an eruption localized to zones exposed to sunlight occurring concurrently with a known photosensitizing drug. Cessation of therapy as illustrated here essentially leads to complete resolution.

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