

Letter to the Editor

Allergic and photoallergic contact dermatitis to Olaquinox in a pig breeder with prolonged photosensitivity

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To the editor,

Olaquinox is an allergen and photoallergen specifically affecting pig breeders. Only a few cases of allergic and photoallergic contact dermatitis have been reported since 1985 (1–5). We report a new case which stresses the importance of Olaquinox as an allergen and photoallergen capable of inducing prolonged photosensitivity.

A 53-year-old man presented in March 1999 with a photodistributed eczema on the face (sparing eyelids), neck and backs of the hands and fingers. He had been taking Rilmenidine (Hyperium[®]) and Diltiazem (Monotildiem[®]) for 4 years, Pravastatin (Elisor[®]) for 1 year withdrawn in March 1999. The patient was atopic. He had also worked as a pig breeder for 10 years and used azaperone (Stresnil[®]), a sedative drug for pigs, oxytetracycline (Duphacycline[®]) and Olaquinox, an antibiotic molecule which is added to the pigs food to avoid enteritis at the time of weaning. Olaquinox was included in a vitamin and mineral complex presented in powder form. The photobiological testing was performed with two sources of light: polychromatic irradiation (UVB, UVA, visible)

provided by a device consisting of a xenon lamp and a metal halide lamp (Dermolum UM-W[®], Müller, Germany) filtered with a Schott WG 305–1 mm filter, dosimetry being performed with a thermopile giving the total irradiance and by a high pressure UVA lamp (UVA-700[®], Waldmann, France), emitting in the UVA₁ range (340–400 nm) with an incorporated dosimeter. The polychromatic minimal erythema dose was 720 mJ/cm² (normal ≥ 500 mJ/cm²). The simple UVA phototest (13 J/cm²) was negative at 24 h. The patch and photopatch tests were performed with the standard series of the French Society of Photodermatology (28 photoallergens), one series of pesticides and three drugs, namely Elisor[®], Hyperium[®] and Monotildiem[®] (the tablets were crushed and then diluted in 10% water and 10% vaseline). Patch tests were performed in triplicate and the patches removed after 24 h in two series. One series was irradiated with 5 J/cm² of UVA, the second series with a suberythral dose of polychromatic radiation (0.75 MED); the third non-irradiated series served as the control. The patch tests and photopatch tests showed a contact allergy to fragrance mix, balsam of Peru, Captan and Folpet, as appearing irrelevant to this photodistributed eczema. The drug photopatch tests remained negative. Two months later and



Fig. 1: Olaquinox UVA photopatch tests at 48 h

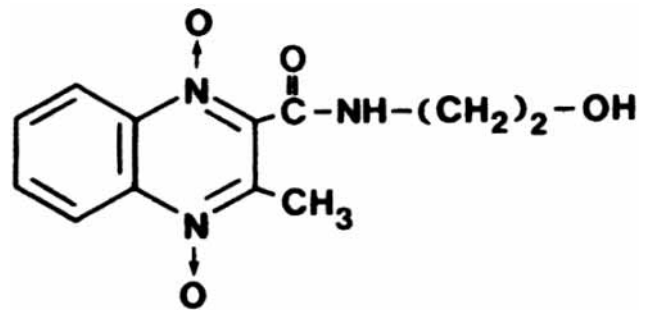


Fig. 2: Structural formula of Olaquinox

Table 1. Results of photopatch tests

	Control		UVA, 5 J/cm ²		UVB, 3/4 MED	
	48 h	72 h	24 h	48 h	24 h	48 h
Olaquinox						
0.1% water	–	+/-	+/-	–	+/-	++
0.5% water	+†	+	+	+	+	++
0.5% vaseline*	–	++	++	++	+	++
10% vaseline*	–	++	++	++	++	++
Stresnil® (azaperone)						
1% water	–	–	–	–	–	–
0.4% water	–	–	–	–	–	–
Duphacycline® (oxytetracycline)						
20% water	–	–	–	–	–	–

*Following the recommendations of Patch testing (De Groot A. C. in Patch testing second edition (1994) Elsevier Science B.V).

†+ to + + + as recommended by the International Contact Dermatitis Research Group

8 days after the removal of Olaquinox, there was still a photodistributed eczema, the polychromatic MED was decreased to 259 mJ/cm² and the UVA MED was reduced to 5 J/cm². Patch tests and photopatch tests with Olaquinox showed a contact and photocontact allergy in UVA and UVB (Table 1, Fig. 1). Four months after withdrawal of the Olaquinox, the clinical symptoms persisted with a photodistributed eczema and photosensitivity. The polychromatic MED (1849 mJ/cm²) and the UVA MED (> 13 J/cm²) were now normal. In December 2000, the patient was recalled and reported a photosensitivity with pruritus, erythema and papules occurring on the face after each short UV exposure. Thus, the evolution showed a prolonged photosensitivity more than a year and a half after withdrawal of the Olaquinox.

Structurally, Olaquinox presents two benzene rings, with alternating simple and double bonds (4) leading to its photosensitizing properties (Fig. 2). In 1996 Schauder et al. (4) reported 15 cases of allergic (four cases) and photoallergic contact dermatitis (11 cases) to Olaquinox. The time delay between the first Olaquinox contact and the onset of photosensitivity varied between 1 month to several years (7–11 years) somewhat like the 10 years seen in our case. The evolution of the eruption showed a transient light reaction in four cases and persistent light eruption or chronic actinic dermatitis in 10 cases. In our case, the evolution showed a prolonged photosensitivity more than a year and a half after withdrawal of the Olaquinox. Since 1st September 1999, however, Olaquinox has been removed from the market in all European Community countries according to the Official Journal of the European Community, but this is not the case in other countries.

We recommend the practice of patch and photopatch tests to Olaquinox in pig breeders with photosensitivity, even in the European Community countries, given the high frequency of transient light reaction and chronic actinic dermatitis with this particular allergen. Furthermore, Olaquinox should, in due course, be withdrawn world-wide because of the potential persistent nature of Olaquinox contact photoallergy.

References

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