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Contact cross-sensitization among quinolines

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Key words: chlorquinaldol; clioquinol; contact dermatitis; cross-sensitization; hydroxyquinolines; patch test.

● 8-HYDROXYQUINOLINES are widely used as antiseptic preservative, and antioxidant topical drugs. We report a patient with local and generalized contact dermatitis caused by a Colposeptina[®] vaginal ovule.

A 31-year-old woman suffered vaginal erythema, itching, and

edema, and eczematous lesions in abdominal and thoracic areas 24 h after application of Colposeptina (promestriene and chlorquinaldol) vaginal

A case of generalized contact dermatitis to chlorquinaldol.

ovule. The cutaneous lesions disappeared by 3 weeks after treatment with oral corticosteroids and antihistamines without desquamation or residual lesions.

The patient had suffered several episodes of external auditory canal eczema due to an antiseptic ointment to treat external otitis. She had been diagnosed as having contact allergy to clioquinol in a dermatology clinic 5 years before.

Patch tests to clioquinol and chlorquinaldol (5% pet.), promestriene (0.1% alcohol), paraben mix (15% pet.), wool alcohols (30% pet.), balsam of Peru (25% pet.), formaldehyde (1% pet.), ethylene-diamine (1% pet.), Scandinavian turpentine (0.3% pet.), mercury (0.5% pet.), and benzalconio chloride (0.1% aq. sol.) were done. They were positive to clioquinol and chlorquinaldol (48 and 96 h), and negative to the other allergens.

The halogenated hydroxyquinolines include iodochlorhydroxyquin, iodoquinol, broxyquinoline, chlorquinaldol, clioquinol, and chlorhydroxyquinoline. These drugs are widely used as topical antiseptic agents, and they have been administered systemically to treat intestinal or urinary infections.

Quinoleine mix (6%) is made up of clioquinol and chlorquinaldol. Standardized patch results from various groups show a sensitization to these drugs approaching to 1–1.5% of all cases (1, 2). There is a high contact sensitization rate to hydroxy-quinolines in leg ulcer and chronic venous insufficiency patients (6%) (3) and in elderly ones.

Clioquinol contact allergy occurs more often than that to other quinolines, perhaps because it is used more than the other halogenated hydroxyquinolines. Reactions to chlorquinaldol are far less common, and usually the patient is sensitized to clioquinol too (1). Clioquinol often exhibits cross-reactivity with other topical or systemic halogenated hydroxyquinolines (1, 3). This cross-sensitization may exist to some oral

quinolines such as certain antimalarial drugs that contain a quinoline nucleus inside their structure. Kennekamp & van Ketel (4) found that 40% of previously clioquinol-sensitized patients had positive patch tests to different antimalarial drugs (quinine, resorquine, and amodiaquin). These drugs are frequently prescribed as prophylactic or therapeutic antimalarial agents. Many people travel to regions where it is necessary to use these drugs. As contact allergy to quinolines is common, systemic contact dermatitis reactions to antimalarial drugs may increase if physicians do not consider the possibility of cross-reactivity.

We report a patient who suffered generalized contact dermatitis caused by chlorquinaldol. She had been previously diagnosed with contact allergy to clioquinol. Oral or mucosal administration of topical sensitized drugs may cause a generalized dermatitis that might be serious.

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Accepted for publication 17 April 2001
Allergy 2001; **56**:795
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ISSN 0105-4538

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