

# A tricky case of contact dermatitis: contemporary allergic reaction to topical and oral acyclovir and scar gel

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## Case report

A 27 years-old girl was referred to our Department for a 1-year history of recurrent episodes of edema and eczema of the face. The patient assumed she was intolerant to several cosmetic products such as facial moisturizers and cleansers. She had a history of monthly relapsing labial herpes simplex virus (HSV) infection treated with topical application of tea tree oil or antiviral drugs and sometimes with diode laser. Clinical examination revealed a circumscribed rounded area of eczema on her back, corresponding to the skin area where she was applying acyclovir cream (Acyclovir ABC 5%®) since few days, for suspected herpes simplex infection. For this reason, delayed allergy to acyclovir was hypothesized and specific patch test rescheduled. Several weeks after, she had a new serious flare of labial HSV for which she received prescription for oral acyclovir 200 mg (Acyclovir EG®), five times per day for 5 consecutively days. Few hours after the first administration she developed an erythematous rash involving both face, trunk and arms with burning and itching symptoms. Upper lip was covered with crusty, yellowish lesions (Fig.1), diagnosed as local adverse reaction, and treated with systemic administration of oral corticosteroids (betamethasone 4 mg daily for five days with gradually tapering until withdrawal). We advised the patient to avoid topical and systemic antiviral drugs and we prescribed a lysine-based supplement. The patch test was scheduled 10 months later. We tested SIDAPA (Società Italiana di Dermatologia Allergologica, Professionale ed Ambientale) 2016 series[1], tea tree oil, propylene glycol 5%, acyclovir ABC 5%® and a scar gel (Mederma 5%®) the patient regularly used to improve small scars due to recurrent herpes infections. At D4 we observed positive reactions on nickel sulfate 5% ++, scar gel ++ and topical acyclovir++. The patient refused the application of acyclovir 10% in pet. for fear of systemic

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reactions, as reported in the informed consent. We've contacted the manufacturer of the gel that sent us the ingredients'list and there were no common ingredients between the topical antiviral and the gel. Moreover, the manufacturer has not agreed to the shipment of test substances.

## Discussion

Allergic contact dermatitis caused by antiviral drugs has been rarely reported[2-5]. Systemic reactions after topical sensitization are even more rare[6 7] but raise the problem related to global safeness of antiviral therapy. Acyclovir, Valacyclovir, Ganciclovir and Famciclovir share the 2-aminopurine nucleus, thus cross-reactions are common[6 7]. In our case, the prolonged use of topical acyclovir caused allergic contact dermatitis and subsequently a systemic diffuse eczematous rash after oral intake. The patch test confirmed a negative reaction on propylene glycol, contained both in antiviral cream and scar gel[8]. To date, there are no evidence about the potential tolerance for cidofovir and foscarnet. In our pandemic SARS-CoV-2-era an extensive knowledge about allergic reactions to antiviral drugs is ausplicable for all physicians[9].

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Fig.1 On the left, eczematous patch of the back, where the patients applied topical acyclovir 5%; on the right, crusty, yellow lesions of the upper lip and erythematous rash of the trunk.

