Activation of Herpes Simplex Infection after Tattoo

Tattooing is a procedure where ink is applied to an area of the skin, mostly intraepidermally (1). This procedure is carried out mainly for aesthetic purposes. Lately, it has been used as a corrective medical procedure following amputation of mammilla. The procedure is aggressive (2), and the fact that skin is punctured many times with the same needle which cannot be fully sterilized may cause infection of the treated area with bacterial, fungal, or viral agents that may lead to health consequences manifesting in the form of verrucae vulgaris, molluscum contagiosum, and herpes simplex. On the other hand, complications such as granulomas, allergic reactions, Koebner phenomenon, lupus erythematosus, psoriasis, lichen ruber planus, hepatitis C, and HIV infections should also be considered as potential consequences of tattooing (3-7). Even systemic reactions have been reported. Herein we describe a case of herpes infection activation after tattooing.

Herein we present the case of a 46-year-old woman, employed in the medical sector, with a two-day history of herpes simplex in the labial area that manifested following application of a cosmetic tattoo meant to outline the lips (Figure 1). Two days after tattoo application, the vesicular lesions appeared along the area that was filled with ink, followed by sub-febrile temperature and fever and a subjective feeling of itching initially, followed by burning sensation and pain. The skin signs located on erythematous base were mainly grouped vesicles with sharply demarcated borders. Regional lymphatic nodes, mainly retro auricular, were enlarged. Within 48 hours, the patient was treated with acyclovir tablets in a dose of 800 mg three times a day and an antipyretic. Acyclovir ointment was administered during the first two days, as well as tetracycline ointment after the second day of the eruption. On the fifth day, we observed regression of the skin changes (Figure 2), and complete healing was achieved after one week.

We assessed the medical history of the patient, which revealed the following: hypothyreosis due to lobectomy performed for the treatment of toxic adenoma. The patient was under substitutional therapy with 75 mg levothyroxine.

The patient had herpes simplex before, and this was the second herpetic eruption.

Herpes simplex is caused by a herpes simplex virus (HSV) type-1 infection that is transmitted through droplets of saliva or direct contact with the affected area, for example during kissing (8-10). Histology reveals intraepidermal blisters, degeneration in epidermal cells at the base of the vesicle, and multilocular eosinophilic inclusional bodies inside cells. Infection is usually more pronounced in the initial phase of disease, where the symptoms are also more intense. Activation of the infection occurs when the body

Figure 1. Herpes simplex infection (day 2).

Figure 2. Herpes simplex labialis (day 5).

undergoes a decrease in immunity (1), in situations of extensive exposure to the sun, and also in some other circumstances, such as the application of a tattoo as described herein. Tattooing can inoculate the virus or trigger the activation of the herpes virus and other viruses (1,8-10). Tattooing, apart from bringing social stigma in some cases, which is one of the major issues for persons who undergo the procedure, may also cause injuries, contact dermatitis, foreign body granuloma, infections, and allergic reactions including anaphylaxis. Herpes simplex infections are also possible, either by inoculation or reactivation of the HSV.

Except in situations where the tattoo is performed for medicinal purposes, tattooing is not a procedure that is supported by dermatologists. Furthermore, tattooing also causes a number of side effects. Allergic reactions (3,4), anaphylactic shock, foreign body granuloma, lichen ruber planus (5), granuloma pyogenes (5), verruca vulgaris, molluscum contagiosum, herpes simplex, and some other bacterial and viral infections.

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