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CASE REPORT

Facial zona zoster following cryotherapy in an immunocompetent patient

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ABSTRACT

Cryotherapy is commonly used in different medical fields including dermatology, urology, oncology and sports medicine. The well-known complications of cryotherapy include dyspigmentation, scar formation and hair loss. Herein, a facial zona zoster case is reported as an unexpected complication of cryotherapy.

Keywords: cryotherapy, herpes zoster, virus diseases.

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INTRODUCTION

Cryotherapy is a non-invasive procedure which is commonly used in dermatology to treat various benign and malignant skin conditions including warts, seborrheic keratoses, skin tags, actinic keratoses, superficial basal cell carcinomas, etc. Liquid nitrogen is typically used to cool the intended tissue to create ischemic necrosis and form ice crystals [1]. Herein, an unusual case of zona zoster following crytotherapy applied for solar lentigines and seborrheic keratoses, is reported.

CASE PRESENTATION

A 71-year old man was seen at the dermatology outpatient clinic due to the gradually increasing number of brownish skin lesions involving the face and scalp. After clinic examination, he was diagnosed with multiple solar lentigines, seborrheic keratoses and actinic keratoses. The dermatoscopy supported the clinical diagnoses. He did not have any other systemic disease and was not using any kind of medication. Strict use of sunscreen was recommended to the patient and biweekly cryotherapy application was started. Two days after the fifth cryotherapy session, the patient developed mildly-painful, pruritus erythematous plaques involving the right mandibular area, inferior cheek, scalp and ear compatible with dermatomal distribution (mandibular division of trigeminal nerve, cervical 2-4 nerves) (Figure 1). The final diagnosis was zona zoster; the patient didn't have any other recent provoking factor such as infection, surgery, distress or immunosuppression. Additionally, he wasn't previously diagnosed with zona before and he remembered having chickenpox disease during childhood. Oral brivudine treatment for a week resulted in the crusting of the lesions even though mild burning sensation seemed to persist.

DISCUSSION

Zona zoster is an infectious skin disease characterized by sudden onset of painful vesicular eruption typically involving one or more dermatomes of the skin. Some well-known risk factors for zona development are immunosuppression, malignancy, older age, female gender and psychological stress [2]. Even though physical trauma is a less-defined contributing factor, there are a few reports in the literature related to the development of zona after botulinum toxin mixed with hyaluronic acid injection [3] and thoracic trauma [4]. Our patient didn't have any other comorbidities or immunosuppression

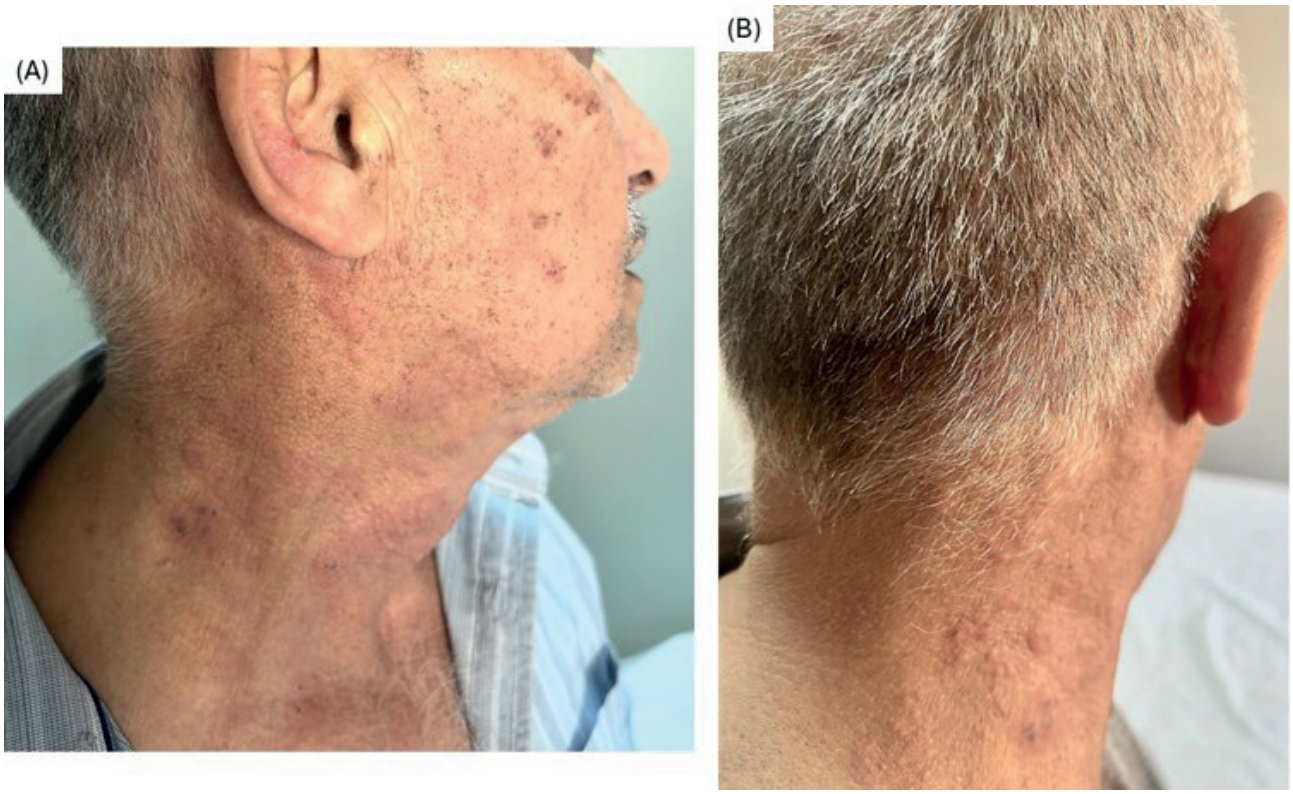

Figure 1. Erythematous plaques involving the right mandibular area, inferior cheek and neck (A) and posterior scalp (B).

which would play a role in the emergence of zona zoster. He developed erythematous papules and plaques involving the right mandibular area and scalp which were all compatible with the sites of previous cryotherapy application for solar lentigines and seborrheic keratoses. Similar to our case, Lee and Ryman [5] reported a case of herpes zoster observed in the right forehead of 56-year old man after cryotherapy treatment for solar keratoses. Trauma-induced viral activation might have played a role in the development of zona in our present case. To prevent the complications associated with zona zoster in eldery individuals, two doses of recombinant zoster vaccine is recommended by Center for Disease Control and Prevention for people who are at age 50 years or older [6].

All in all, it is important to emphasize that cryotherapy could be a provoking factor for the develolopment of zona in otherwise immunocompetent individuals.

Author contribution

Study conception and design: EB; data collection: EB; analysis and interpretation of results: EB; draft manuscript preparation: EB. All authors reviewed the results and approved the final version of the manuscript.

Ethical approval

Since a single case is reported, no ethical approval is needed.

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Conflict of interest

The authors declare that there is no conflict of interest.

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