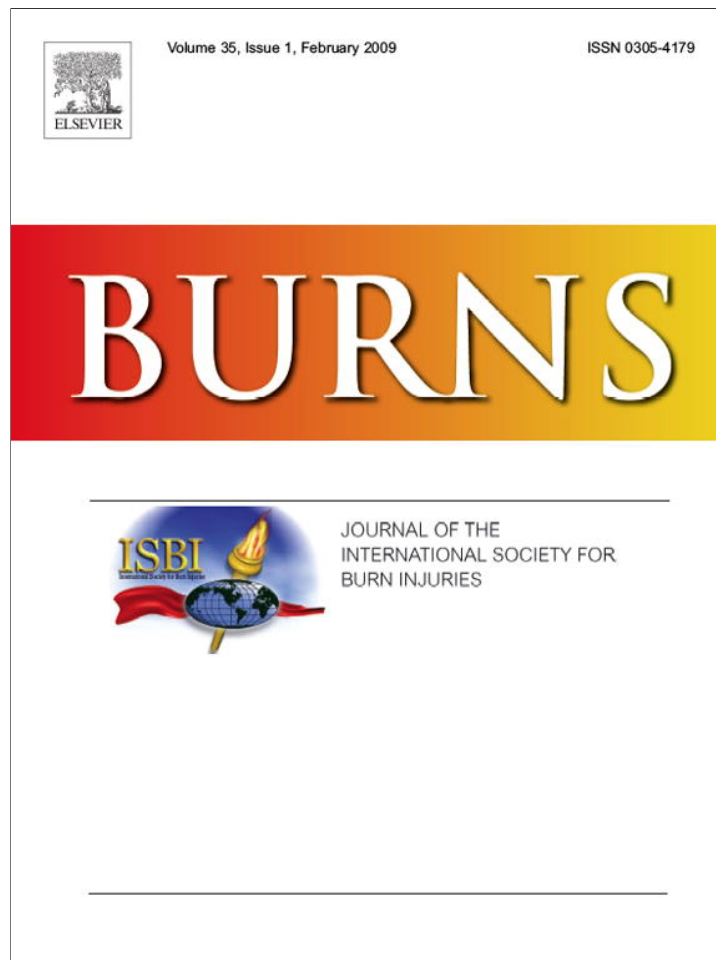


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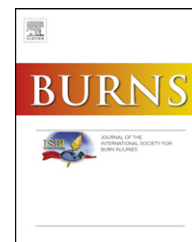


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Case report

Salicylic acid burn induced by wart remover: A report of two cases

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1. Introduction

Salicylic acid is a well-known topical keratolytic agent. Various concentrations of its derivatives have been used for different applications ranging from the treatment of acne to chemical peels [1,2]. Oral mucosal burns caused by exposure to aspirin and other salicylic acid derivatives have been reported in the past [3–5]. To our knowledge, there is no report in the literature on a burn to the skin caused by salicylic acid.

2. Case report

Two sisters, aged 9- and 13-year-old, presented to our unit with partial thickness burns to their left forearm and right forearm after self-treatment of warts over the olecranon process with over-the-counter Scholls® Clear Away One Step Salicylic Acid Plantar Wart Remover (Schering-Plough Healthcare). Both children started using the Plantar Wart Remover 10 days prior to presentation with chemical burns to the elbow. Both had insisted that they followed the exact direction of application as provided by the manufacturer. They were both healthy otherwise with no significant past medical history.

On examination, there was a 4 cm × 6 cm area of partial thickness burn with islands of normal skin on the left elbow (Fig. 1) of the 9-year-old girl. Her older sister had a 3 cm × 8 cm

area of partial thickness burn with some granulation tissue on her right elbow (Fig. 2). Both wounds were washed thoroughly and treated conservatively with paraffin gauze dressings. The wound on the left elbow of the 9-year-old girl healed after 1 week and the right elbow wound of the 13-year-old girl healed after 2 weeks.

3. Discussion

The salicylic acid keratolytic effect appears to be concentration dependent [1]. A 5% and above concentration exerts an increasingly potent and rapid deep keratolytic effect on the stratum corneum and ultimately exerts an exfoliative action. Various concentrations of its derivatives have been used for different application ranging from the treatment of acne to psoriasis to chemical peels [1,2]. Concentration of up to 50% has been used for wart removal [1]. It works by reduces the intercellular cohesiveness of the horny cells by dissolving the intercellular cement material and reduces the pH of the stratum corneum thereby increasing hydration and inducing softening. This leads to desquamation of corneocytes [1].

The active ingredient of the Plantar Wart Remover is 40% salicylic acid [6]. It is marketed as a one-step, fast wart remover for warts only on the bottom of the foot [6]. The manufacturer warned against its application on moles,

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Fig. 1 – Area measuring 4 cm × 6 cm on the posterior aspect of left elbow showing partial thickness burn with multiple small islands of normal skin among the zone of injury.



Fig. 2 – Partial thickness burn with granulation tissue formation on the posterior aspect of right elbow 10 days following contact with Plantar Wart Remover.

birthmarks, warts with hair, genital warts, or warts on the face or mucous membranes. Both of our patients used the Plantar Wart Remover on warts on their elbow. Although the warts were removed, both suffered partial thickness burns to their elbows. The reason for the burn is likely to be due to the thinner epidermis on the elbow compared to the thicker, glabrous skin on the sole of the foot. On the thinner skin, once the horny layer is dispersed, the high concentration of hydrogen ion from salicylic acid induces coagulative necrosis of keratinocytes at the basement membrane resulting in the chemical injury.

In conclusion, both of these cases highlighted the importance of following the manufacturer's instruction of use for over-the-counter medication. Both children decided to use the Wart Remover which is indicated only for the sole of the foot on their elbows with serious consequences. It is crucial that the application of any over-the-counter medication be closely supervised by adult if used in children and to seek medical

advice as soon as possible if encountering any unusual effects to prevent serious injury.

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