

A Case of Cyanoacrylate Glue Burns in a Two-Year-Old Child

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Cyanoacrylate is an organic monomer. Cyanoacrylate compounds are highly unstable and they undergo hydroxylation reaction by an exothermic reaction in the presence of hydroxyl (-OH) group like water or a weak base.^{1,2} This reaction is catalyzed by cotton and wool. It is advised not to use cotton gloves while handling these compounds.³ Kelemen et al in their study showed that, on an average, the heat produced during this exothermic reaction is 68°C for 12.2 seconds, which is sufficient to cause a full-thickness burn.⁴ Even though the use of these compounds are ubiquitous, the awareness regarding the burns caused by these compounds is poor.

This is a case of cyanoacrylate glue burns in a 2-year-old boy (► **Figs. 1** and **2**) who was wearing cotton trousers and



Fig. 1 Initial intraoperative image showing patchy pale areas of second-degree deep burns over the medial aspect of the left thigh.



Fig. 2 Day 6 of medial aspect of the left thigh with unhealthy tissues.

had history of spillage of almost a full bottle of 50 mL flexkwik. He was managed with wound debridement and split-thickness skin grafting. The graft and wound settled well (► **Fig. 3**). Cyanoacrylate burns in children are quite few in number all over the world.² First case reported in a child was by Clarke et al in 2011, wherein full-thickness burns was caused by cyanoacrylate glue.^{2,5}

Direct contact of cyanoacrylate glue with skin does not cause severe burns, but is known to produce localized reactions or allergic contact dermatitis typically affecting the eyelids, cheeks, neck, hands, and perianal regions. The number of burn cases reported are only few even though these glues are used in daily life.

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Fig. 3 Postoperative day 25 showing healed wound.

First aid for cyanoacrylate burns should be given immediately with saline irrigation. Treatment can be conservative in case of superficial burns, and might require debridement and

split-thickness skin grafting in case of deep burns. Awareness regarding the hazardous potential of cyanoacrylate glues in causing thermal burns and its reaction in presence of cotton and wool is very poor among the public and even among medical professionals. No specific warning regarding a serious injury like burns was seen on the label of the product. Risk of these hazards should be clearly mentioned on the label of these products to avoid similar incidents.

Conflict of Interest

None declared.

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