Accidental Burn during Tonsillectomy

To the Editor—Accidental burns may occur in the operating room from different sources.1,2 Presented here is a case of accidental second-degree burns that occurred when a warmed bag of intravenous fluid (IVF) was used to hyperextend the neck during a tonsillectomy.

A thirty-yr-old, 70-kg woman, ASA physical status 1, was admitted for elective tonsillectomy. Under general anesthesia, the patient was positioned supine with both arms tucked by her sides. The neck was hyperextended by placing a 1-L bag of IVF between the scapulae. The IVF bag was placed on top of a heating blanket warmed to 39°C. Two layers of cotton sheets were between the patient and the IVF bag. Surgery proceeded for 30 min, and after uneventful extubation and emergence, the patient was brought to the recovery room. Fifteen minutes later, the patient complained of pain and burning sensations across the upper back. Examination at this time revealed a 10 × 30-cm area of second-degree burn with blistering across the upper back (fig. 1). The outline of the injury corresponded to the position and shape of the IVF bag.

The patient was referred to the hospital burn center. A silver sulfadiazene 1% occlusive dressing was applied. The patient was discharged the following day and was subsequently treated at the burn center outpatient clinic. The burns healed well without skin grafting.

It is routine at our institution to use an IVF bag under the scapulae to allow neck hyperextension during tonsillectomy. This IVF bag is normally at room temperature. In the case presented, the IVF bag was from a fluid warmer set at 55°C. This temperature accommodates cooling of IVF during administration.3 To identify the causative factors, in the above case, we attempted to simulate the events surrounding the injury. A heated IVF bag from the same warmer was used to support the shoulders of an awake volunteer. Although only warm to the touch, the IVF bag was uncomfortably hot when laid upon, and the pain was intolerable after 10 min. The temperature of this IVF bag was 48°C at the outset and decreased only 3.2°C during 30 min of exposure to the warming blanket. The blanket apparently limited the dissipation of heat from the IVF. Both pressure and persistent heat likely contributed to the burn in our patient.

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REFERENCES


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