Surgical site fire during surgery in operating room under general anaesthesia

Sir,

Operating room (OR) fires, although considered rare, are preventable adverse events associated with a high morbidity and mortality. Despite taking all safety precautions and abiding by all the recommendations for fire prevention, such unintentional events do occur. The prerequisites for every fire are an ignition source, a fuel source, and an oxidiser. Notably, among the vast majority of cases reported worldwide, very few have been described in detail till date.[1] Herein, we report a case of a lady undergoing surgery under general anaesthesia, who experienced an OR fire related to the use of alcohol-based solution ignited by monopolar electrocautery.

A 33-year-old female, a case of carcinoma right buccal mucosa planned for wide marginal mandibulectomy under general anaesthesia. The trachea was nasally intubated with flexometallic tube as per institution protocol. The surgical site was cleaned and draped by surgeons. They used povidone-iodine solution followed by isopropyl alcohol solution for cleaning. After preparing the site and allowing at least 2 min drying time, surgery was started. A 5cm skin incision was made using a scalpel in the usual fashion. During the first activation of the electrosurgical unit a muffled "pop" was heard. This was followed almost immediately by the appearance of fire at the head end. Surgeons quickly flushed the fire with saline and removed the burning gauze and drape from patient skin. Fire protocol was activated, oxygen was turned off, and patient was ventilated manually with air using a resuscitation bag. The fire lasted for 10--15 s from ignition to complete extinction resulting in second degree burn. By the time fire was down, the patient suffered second-degree skin burns over face. On careful examination, it was observed that the alcohol solution had seeped into the hair of the patient around the right ear under the drapes. The residual alcohol film on the skin had caught fire from the sparks of the electrocautery igniting the fire. Patient was haemodynamically stable. Surgery was resumed after swiftly painting and draping the surgical site again. After putting down the fire, surgery was completed and patient was extubated and shifted to surgical ICU for postoperative care. Postoperatively on examination by reconstructive surgeons, the patient was found to have sustained second-degree superficial partial thickness burn [Figure 1].

Intraoperative fires occur more commonly than most people recognise. Alcohol-based solution is a well-known cause of fire in the OR.[2] The point to consider is that in head and neck surgeries, when alcohol-based preparation is used, it can trickle down into the hair of the patient and may take time to evaporate. Taking all necessary precautions to prevent such fires is most important in all surgeries. Firstly, only as much quantity of alcohol as required should be used and secondly, draping should be done only when residual alcohol vapours get evaporated beneath the hair (especially long hair of female patients).

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and

Figure 1: Postoperative image of head and neck showing second-degree superficial partial thickness burn

due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Received: 04th May, 2019
Revision: 26th May, 2019
Accepted: 26th June, 2019
Publication: 10th October, 2019

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Access this article online	
Quick response code	Website: www.ijaweb.org
	DOI: 10.4103/ija.IJA_347_19

How to cite this article: Singh S, Kate S, Bhan S, Suhag V. Surgical site fire during surgery in operating room under general anaesthesia. Indian J Anaesth 2019;63:865-6.