

Facial pressure ulcer ensuing use of eye protection goggles: Secure your hatches before proning!

Dear Editor,

The incidence of pressure ulcers in the operating room (OR) varies from 5% to 66%, and these are likely to increase the cost of care by \$5000 to \$40,000.^[1,2] Facial pressure ulcers have infrequently been reported after spine surgery. The use of a specially designed head positioner and eye protection goggles (EPGs) is a common practice to circumvent these injuries, but a pressure ulcer consequent upon its use has never been reported. We are reporting a grade II facial pressure ulcer resulting from the use of EPG during the transforaminal lumbar inter-body fusion (TLIF) procedure.

A 46-year-old female weighing 65 kg was posted for TLIF in the prone position. After routine anesthesia induction, EPGs (IGuard™ Eye protector, SunMed, USA), were applied and the patient was carefully turned prone on a foam headrest pillow with a slot for the eye. The procedure lasted for 2 hours, and the patient remained hemodynamically stable. After the case, when the EPG was removed, the left infraorbital area (corresponding to the EPG's inferior margin) showed a grade II pressure ulcer along with surrounding erythema and edema [Figure 1].

After extubation, the patient reported periorbital burning pain. She denied any history of prior skin ailment or use of long-term steroid therapy. A topical silver colloid ointment was prescribed to minimize sequelae as per the dermatologist's



Figure 1: Infraorbital pressure ulcer seen after removal of the protection goggles

advice. Over the next 2 weeks, the wound healed with residual hyper-pigmentation.

During the prone position, direct pressure on bony prominences can lead to localized skin ischemia and necrosis because of the high interface pressures, shearing forces that occur at these sites, and the decreased muscle tone associated with anesthesia.^[2-4] The infraorbital malar region also has a bony prominence which is hardly cushioned by overlying muscles and makes it a vulnerable spot to pressure ulcer formation. Besides extremes of age, any skin ailment or chronic steroid therapy pre-disposes to these injuries.^[2,4]

At our institution, EPGs are routinely applied to prevent pressure-related eye injury in the prone position. The patient did not have any pre-disposing factors, and it was localized injury and hence unlikely to be related to sensitivity to adhesives.

The EPG frame is made up of rigid plastic which is cushioned by a self-adhesive foam material to protect any pressure injury to eyes. It comes in a single size for all adults, and fit may not be the same in all facial configurations. A previous report had described a case of central retinal artery occlusion during surgery in the prone position with EPG placed over his eyes.^[5] The purported cause for the event was direct compressive contact between the plastic lens and the eye. In the present case, probable movement of the head might have led to slipping of the foam cover and application of friction and pressure by the plastic beneath.

To avoid this grave complication, the head should be frequently checked in the prone position and the edges of the EPG should be checked to be properly placed over soft tissues. This complication and its ramifications (scar formation, permanent discoloration, risk of infection) should be discussed with all patients positioned prone for surgery.

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 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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Access this article online	
Quick Response Code:	Website: https://journals.lww.com/joacp
	DOI: 10.4103/joacp.joacp_2_22

How to cite this article: Gupta A, Baidya DK. Facial pressure ulcer ensuing use of eye protection goggles: Secure your hatches before proning! *J Anaesthesiol Clin Pharmacol* 2023;39:651-2.

Submitted: 02-Jan-2022 **Revised:** 18-Jan-2022

Accepted: 20-Jan-2022 **Published:** 19-Apr-2023

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