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Enhancing Eye Protection during General Anaesthesia: A Simple Technique

S PARTHASARATHY[1], S GEETHAVARSHINI[2]

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Corneal abrasions are a common challenge encountered during general anaesthesia following non-ocular surgeries, carrying significant risks such as microbial keratitis and permanent scarring [1]. However, the safeguarding of the cornea lacks a standardised approach, leaving clinicians to rely on methods with varying degrees of efficacy and potential side effects. Notably, tape application alone has demonstrated comparable or superior protective benefits with fewer associated drawbacks. This is in contrast to the use of petroleum gel, which poses a risk of flammability, particularly concerning in surgeries involving electrocautery or open oxygen sources near the facial region. As an alternative, the preference leans towards using preservative-free eye ointments to mitigate the potential for corneal epithelial sloughing and conjunctival hyperaemia [2].

Recently, novel advancements such as Geliperm and bio-occlusive dressings have emerged as promising options in this arena [3]. Their efficacy is particularly notable during endonasal procedures that necessitate continuous eye monitoring. To address this gap, the authors propose a meticulous technique for plaster application aimed at protecting the eyes during general anaesthesia. This technique was done in a patient who was a 55-years old patient who underwent laparotomy under general anaesthesia. The method emphasises the importance of ensuring that the plaster is securely affixed after gently stretching the eyelid, thus minimising the risk of entanglement with hair follicles [Table/Fig-1]. Additionally, consideration should be given to the potential discomfort associated with plaster removal upon recovery of consciousness, as it may inadvertently extract hair particles, causing further distress to the patient. The present patient had uneventful removal on the left-side, with hairy tips on the plaster on the right-side. The right-side needed a saline wash but had no delayed problems.

[Table/Fig-1]: Showing proper plaster fixation in the left eye but with improper one in the right eye.

Perioperative exposure keratopathy, influenced by patient factors, anaesthesia, and surgery, is preventable with proper measures. General anaesthesia reduces tear production, leading to corneal damage via increased reactive oxygen species. Thyroid eye disease exacerbates the risk due to incomplete eye closure. Positioning during surgery can also contribute. Prevention involves timely eye closure and appropriate taping. False eyelashes pose a challenge; counseling patients and careful eye protection are essential. Quality improvement initiatives, such as standardised eye protection protocols, significantly reduce incidence rates, showcasing the efficacy of provider education and intervention in mitigating anaesthesia-related eye morbidity [4].

A very simple method of just sticking a plaster does not require any technical knowledge but is also effective and cheap [1]. Despite the efficacy of this technique in many scenarios, its limitations of inadequate eye cover in cases where the head and neck are extended underscore the need for continuous innovation and adaptation in perioperative care practices. Collaborative efforts among clinicians, researchers, and manufacturers are essential to develop comprehensive solutions that address the diverse challenges encountered during general anaesthesia. The authors conclude that the application of a simple white plaster after stretching the eyelid without entangling the hair is ideal for the protection of eyes in the majority of surgeries. The authors admit that this technique only prevents keratopathy and does not target other perioperative ocular complications.

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PARTICULARS OF CONTRIBUTORS:

1. Professor, Department of Anaesthesiology, Mahatma Gandhi Medical College and Research Institute, Sri Balaji Vidyapeeth (Deemed to be University), Pondicherry, India.
2. Junior Resident, Department of Anaesthesiology, Mahatma Gandhi Medical College and Research Institute, Sri Balaji Vidyapeeth (Deemed to be University), Pondicherry, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:
S Parthasarathy,
Professor, Department of Anaesthesiology, Mahatma Gandhi Medical College and Research Institute, Sri Balaji Vidyapeeth (Deemed to be University), Pondicherry-607402, India.
E-mail: painfreepartha@gmail.com

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