

Unusual Skin tear caused by eye taping using acrylic-based adhesive tape in a adult patient with recurrent craniopharyngioma

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Skin tears due to medical adhesives are a ubiquitous but under documented complication that occurs in almost all clinical settings and frequently in patients with certain risk factors. Due to lack of information regarding proper usage, suitable selection and the right technique for application of adhesive products can influence patient safety besides hampering the quality of life. Medical adhesives-related skin injuries (MARS) is the latest term used, defined 'an occurrence in which erythema and/or other manifestations of cutaneous abnormality (including, but not limited to, vesicle, bulla, erosion or tear) persists 30 min or more after removal of the adhesive' [1]. We describe a report of skin tear due to acrylic based adhesive in a young male who underwent craniotomy and tumor excision.

A 21 year-old-male with a diagnosis of a recurrent craniopharyngioma was posted for a Pterional craniotomy and excision of the tumour. The patient had secondary hypothyroidism and secondary hypocortisolism on thyroid and steroid replacement respectively. He was shifted to the OT and after attaching all the standard ASA monitors, he was induced after adequate preoxygenation, with Fentanyl, Propofol and Vecuronium and intubated with a 8.5 mm sized ET tube. A central venous catheter was inserted post induction in the right subclavian vein and was fixed with an adhesive tape. Before positioning the patient, scalp block with 15 ml of 0.5 % bupivacaine was administered. The eyelids were then taped with acrylic-based adhesive tape. The duration of the surgery was approximately 11 hours. In view of the prolonged nature of the surgery, the decision was made to not extubate the patient in the OT and to shift him to the Intensive Care Unit for further management and elective ventilation. Before the patient was shifted out of the OT, the adhesive tapes over his eyes were removed. While the left eye and periorbital region were found completely normal, the right periorbital region was mildly denuded after removal of the tape (Figure 1). The area around the central venous catheter where the same tape had been applied was normal.

Medical adhesive tapes are made of various materials, with each material offering its set of advantages and disadvantages. Injury to

the skin after use of adhesive tapes is a known, albeit a rare complication observed. Various risk factors for the development of skin injury include fragile skin, long duration of application, and chronic use of steroids etc., Retention of moisture underneath the tape before its application can also increase the chances of skin denudation. In our patient, it is possible that the area where the tape had been applied had been wet from the scalp block at the time of application. The moisture could have got retained for the duration of the surgery leading to the trauma. The acrylate tape is less moisture resistant than the silicone tapes so they must be used judiciously. The area to be covered by the tape must be moisture-free before the application.

Zeng et al in 2015 did a prospectively randomised controlled study in 60 patients comparing the 3M Kind Removal Silicone Tape versus standard acrylate based adhesive tapes (3M Durapore and Micropore tape) for facial skin injury and patient satisfaction in at-risk patients under general anaesthesia [2]. They found silicon-tapes had less skin injury as compared to acrylic based tapes. Its essential to take into account the risk factors that can predispose the patient to skin tears and choose an appropriate tape therefore. The anaesthesiologist should be aware of MARS as its occurrence though rare can significantly effect the patient care.



Figure 1: Denudation of skin in the right periorbital region

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