
Facial skin injury caused by acrylate-based adhesive tapes in a post-menopausal patient: A preventable cause

Sir,

A 52-year-old post-menopausal female belonging to American Society of Anesthesiologists Physical Status Class 1, weighing 50 kg, diagnosed with renal cell carcinoma, presented to us for right laparoscopic partial nephrectomy under general anaesthesia. On pre-anaesthetic workup, she had no known allergies, and all investigations were within normal limits. She gave a history of attaining menopause 2 years back. Protocol-based anxiolytics and antacids were given to the patient on the night before surgery. An 18-gauge intravenous (i.v.) cannula was secured in left upper limb using transparent Tegaderm™ dressing. Anaesthesia was induced with injection fentanyl 100 µg, propofol 100 mg and vecuronium 5 mg i.v. The trachea was intubated with 7.5 mm cuffed endotracheal tube (ETT) which was secured using Durapore™ tape, while taking care of any skin puckering and skin tension. After applying ointment in both the eyes, eyelids were taped using Durapore™ tape. After this, patient was given right lateral kidney position. Special care was taken to avoid any pressure

on the lower eye. Surgery was uneventful. Just before extubation, eye tapes were removed. Durapore™ tape used to fix ETT was also loosened at both ends. In spite of gentle removal, skin stripping on left side of face was observed [Figure 1]. After applying moisturiser, rest of the tape was removed slowly and gently without any other complication. Patient was explained about the injury in the post-operative care unit. Plastic surgery consultation was obtained, and wound was managed conservatively.

Adhesive tapes can be made of synthetic rubber, acrylate or silicone. Acrylate-based adhesives are commonly used to secure the ETT and to tape the eyelids. These tapes can cause allergic dermatitis, contact dermatitis and mechanical injuries.^[1] Risk factors for such adhesive-induced skin injuries include patients on chronic steroid therapy, use of exfoliating agent, prolonged surgeries, prone positioning and extremes of age.

Menopause renders the skin around face, genital area and lower limb prone for injury. Decrease in oestrogen level causes a decrease in polymerisation of glycosaminoglycans and degeneration of elastin fibres.^[2] It also causes a reduction in Type 1 and Type 3 collagen fibres with reversal of Type 3 to Type 1 collagen ratio which leads to skin atrophy.^[3] Moreover, intra-operative episodes of hot flushes can raise the temperature of facial skin making it more prone for



Figure 1: Skin stripping of face while durapore was removed

injury.^[4] A uniform pressure should thus be applied while using these tapes to avoid any mechanical injury during their removal. Tape should be removed slowly in the direction of hair growth. While removing it should be kept close to the skin surface, and the newly exposed skin should be supported with the finger. Moisturiser can also be applied to soften the tape. Recently, silicone-based adhesives have been introduced which have significantly lower peel adhesion resulting in a much lower incidence of skin trauma on removal.^[5] We may thus conclude that acrylate-based medical tapes and dressing should be used cautiously with a proper tape removal technique in peri- and post-menopausal 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 due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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