

BACKGROUND

- Medical adhesives are routinely used to secure peripheral nerve catheters.
- These products are generally perceived as low risk allergic contact dermatitis may be under-recognized in regional anesthesia practice.

Case

- A pediatric patient with Charcot-Marie-Tooth Disease underwent lower extremity surgery with ultrasound-guided peripheral nerve block placement of a continuous popliteal nerve catheter.
- A liquid medical adhesive was used for catheter dressing securement.

METHODS

- This report describes a single perioperative case of severe cutaneous injury following peripheral nerve catheter securement. Written informed consent for publication and image use was obtained from the patient.
- As this case report is devoid of patient-identifiable information, it is exempt from Institutional Review Board review requirements as per institutional policy. No investigational drugs or devices were used.

RESULTS

Figure 1. Acute Adhesive-Associated Dermatitis

Acute erythematous, vesiculobullous dermatitis localized to the regional anesthesia catheter securement site within 48 hours of placement, corresponding to the adhesive footprint.



Figure 2. Delayed Cutaneous Sequelae

Post-inflammatory hypopigmentation at prior blistering sites observed approximately 10 weeks after resolution of the acute dermatitis.



RESULTS

- Over subsequent days, the reaction evolved into extensive erosive dermatitis with crusting and desquamation, requiring dermatologic evaluation and treatment with topical corticosteroids and supportive wound care. No systemic allergic manifestations occurred.
- Healing was prolonged, and by approximately 10 weeks post-exposure, residual hypopigmentation persisted at the site of injury, consistent with post-inflammatory pigment alteration. The distribution and severity of injury were sharply demarcated to the adhesive application area, supporting a diagnosis of severe allergic contact dermatitis.

CONCLUSIONS

- This case highlights the diagnostic challenge posed by severe postoperative skin reactions occurring beneath occlusive peripheral nerve catheter dressings. Rapid progression to vesiculobullous dermatitis closely mimicked infection and pressure-related injury, underscoring the importance of early reassessment and maintaining a broad differential diagnosis.
- Prompt catheter removal and multidisciplinary evaluation were essential in guiding appropriate management and avoiding unnecessary intervention. Awareness of adhesive-related cutaneous injury is critical when postoperative skin findings evolve rapidly at regional anesthesia sites.
- Of note, we've only witnessed these reactions in CMT patients, which prompts further investigation to identify any skin sensitivity reactions in this patient population.

REFERENCES

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