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CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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REFERENCES

1. Eggli U. *Illustrated Handbook of Succulent Plants: Dicotyledons*. 2nd ed. Springer; 2007:158.
2. Schempp CM, Schöpf E, Simon JC. Plant-induced toxic and allergic dermatitis (phytodermatitis). *Hautarzt*. 2002;53:93-97.
3. Wilken K, Schempp CM. Toxic phytodermatitis caused by *Euphorbia helioscopia* L. (sun spurge). *Hautarzt*. 2005;56:955-997.
4. Vogt G, Mattes E, Rothenburger J, Hertkorn N, Achatz S, Sandermann H Jr. Tumor promoting diterpenes from *Euphorbia*

5. *leuconeura*. *Phytochemistry*. 1999;51:289-295. doi:10.1016/s0031-9422(99)00016-3
6. <https://www.jungle-leaves.de/produkt/euphorbia-leuconeura-spuckpalme/?lang=enam>. Retrieved 4.7.2022.
7. <https://laidbackgardener.blog/2020/01/17/madagascar-jewel-the-pass-along-succulent>. Retrieved 4.7.2022.
8. <https://plantura.garden/uk/houseplants/madagascar-jewel/madagascar-jewel-overview>. Retrieved 4.7.2022.

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Allergic contact dermatitis to an epidural catheter but what's the allergen?: A case report

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The use of indwelling catheters is common in anaesthesiology. Skin complications caused by epidural catheters have rarely been reported,^{1,2} and usually attributed to the use of antiseptic preparations³ and adhesive dressings.⁴ In cases of suspected allergic contact dermatitis (ACD), patients did not undergo patch testing (PT) to confirm allergy therefore no culprit allergen was identified.^{1,2}

CASE REPORT

We report the case of a 39-year-old female presenting for diagnostic work-up of inflammatory skin lesions attributed to a nylon epidural catheter (Portex, Smiths Medical, Inc., Minneapolis, Minnesota, USA) used during labour. Her medical history included hay fever and migraines. The epidural catheter was placed in the lumbar region. A chlorhexidine swab (Reynard Health supplies, Artarmon, Australia) which was used prior to insertion of the catheter or Tegaderm dressing (3M, North Ryde, Australia), and Mefix

tape (Mölnlycke Health Care, Gothenburg, Sweden) applied to secure the catheter could have elicited cutaneous reaction in the presented case. The epidural catheter was in place for about 10 h and removed shortly after delivery. 1–2 days post-delivery the patient reported an itchy rash with a burning sensation at the site of the epidural catheter. On examination there was a linear, raised, erythematous rash closely following the course of the catheter. She was treated with oral antihistamines to alleviate her symptoms. When reviewed in the dermatology clinic 6 months later, there was still some residual post-inflammatory hyperpigmentation (Figures 1 and 2).

The patient did not react to an intravenous cannula or to a urinary catheter placed during her admission.

Patch testing was performed to the Australian Baseline Series, plastics and glue series, acrylates, isocyanates, chlorhexidine, patient's own products 'as is', Tegaderm dressing (3M, North Ryde, Australia), Mefix Tape (Mölnlycke Health Care, Gothenburg, Sweden) and a sample of the catheter which had been used during labour, as well as two alternative catheters. Allergens were obtained from Chemotechnique Diagnostics (Vellinge, Sweden) and fixed to the skin with AllergEaze test chambers (SmartPractice, Calgary, Canada) for 48 h. Patch test readings were



FIGURE 1 Residual post-inflammatory hyperpigmentation following epidural catheter insertion of the back

performed according to the International Contact Dermatitis Research Group guidelines at Day (D) 2 and D4.

Positive reactions were noted to the three catheter samples 'as is' as well as methylchloroisothiazolinone/methylisothiazolinone(MCI/MI). The results are summarized in Table 1.

DISCUSSION

Cases of ACD to epidural catheters are rare. The usual components are materials such as nylon, Teflon and polymer blends which are generally hypoallergenic.

Other factors that could potentially elicit a cutaneous reaction include the chlorhexidine skin preparation, Tegaderm dressing, Mefix



FIGURE 2 Residual post-inflammatory hyperpigmentation following epidural catheter insertion over the lumbar region

TABLE 1 Positive and doubtful patch test results

	D2	D4
Chlorhexidine digluconate (0.5 aq.)	–	+/-
Hydroperoxides of limonene (0.3% pet.)	+/-	+/-
Abietic acid (10% pet.)	+	+/-
Benzalkonium chloride (0.1 aq.)	–	+/-
Carba mix (3.0% pet.)	+	–
Diaminodiphenylmethane (0.5% pet.)	+/-	+/-
Colophonium (20% pet.)	+/-	+/-
MCI/MI (0.02 aq.)	+	+
Sample—Portex® epidural catheter (Smiths Medical Inc., Minneapolis, Minnesota, USA)	++	++
Sample—Perifix® ONE epidural catheter (B. Braun Australia Pty. Ltd, Bella Vista, Australia)	++	++
Sample PAJUNK® epidural catheter(PAJUNK Medical Produkte GmbH, Geisingen, Germany)	+	+

Note: –, negative reaction; +, weak positive reaction; +/-, doubtful reaction; ++, strong positive reaction; Aq, aqua; D, day; MCI/MI, methylchloroisothiazolinone/methylisothiazolinone; Pet, petrolatum.

Tape or the infused medication. However, her rash closely approximated the distribution of the epidural catheter.

Our extensive tests did not clearly pinpoint a culprit allergen. Only one of the international manufacturers provided any information at all, stating that the catheter was made of polyurethane and polyamide. They subsequently denied that MCI/MI, which had reacted, was present.

The importance of having a complete ingredient list during the patch testing process is crucial in ACD management.⁵ The lack of information regarding composition of medical devices has been previously addressed, with many demanding EU legislation for comprehensive labelling of ingredients in medical devices.⁶ Currently in Australia, there is very little guidance,⁷ which is further hindered by lack of cooperation from companies, as found in this case.

In summary this is the first case report to reproduce ACD to an epidural catheter on patch testing, but disappointingly we have failed to identify the actual allergen.

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REFERENCES

1. Mather CM, Anaes FC, Ready LB, Newman M. Inflammatory cutaneous reactions to epidural catheters. *Anesthesiology*. 1993;78(1):200-203.
2. Eltaki K, Abdulla H, Sinatra RS. A severe inflammatory cutaneous reaction after continuous epidural analgesia. *Anesth Analg*. 2008;106(2): 517-519, table of contents.
3. Erdmann S, Hertl M, Merk HF. Allergic contact dermatitis from povidone-iodine. *Contact Dermatitis*. 1999;40(6):331-332.

4. Cronin E, Calnan CD. Allergy to hydroabietic alcohol in adhesive tape. *Contact Dermatitis*. 1978;4(1):57.
5. Nixon RL. Material safety data sheets and allergic contact dermatitis: a misleading case. *Australas J Dermatol*. 1997;38(3):165.
6. Herman A, Uter W, Rustemeyer T, et al. Position statement: the need for EU legislation to require disclosure and labelling of the composition of medical devices. *J Eur Acad Dermatol Venereol*. 2021;35(7):1444-1448.
7. Therapeutic Goods Administration. *Medical Device Labelling Obligations*. Australian Government; 2020.

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Re-emergence of allergic contact dermatitis from chlorphenesin

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INTRODUCTION

Only a few cases of allergic contact dermatitis (ACD) from chlorphenesin have been reported and since 2015, no new cases have been published.¹⁻⁶ We describe two additional cases of ACD from this preservative in cosmetics observed during late 2021.

CASE REPORTS

Case 1

A 25-year-old non-atopic woman presented with an erythematopapular eruption of the neck, abdomen, arms, and thighs. As ACD was suspected, patch tests were performed with the European baseline and cosmetic series (Chemotechnique Diagnostics, Vellinge, Sweden, and AllergEAZE, SmartPractice, Phoenix, AZ), as well as with the patient's cosmetic products, using IQ Ultra chambers (Chemotechnique Diagnostics). Following an occlusion of 2 days, the tests were read on day (D)2 and D4 according to International Contact Dermatitis Research Group criteria. Only a positive reaction (++) was observed to a moisturizing cream (Xemose anti-itch soothing oil balm; Uriage, France). Subsequently, patch tests were carried out with the separate ingredients of this product, obtained by the manufacturer. Readings on D2 and D4 showed positive reactions (++/+) to chlorphenesin (0.3% aq.) (Figure 1A). Patch tests with this chlorphenesin preparation in 10 controls were negative.

Case 2

A 32-year-old man presented with an erythematopapular eruption on the hands. He had noted worsening of the skin lesions following the application of a hand cream (Bariederm-CICA insulating repairing hand cream; Uriage, France). He also reported a facial eruption after using a face cream (Hydraphase HA Rich; La Roche Posay/L'Oréal, Clichy, France) (Figure 1B). Patch tests were performed, as in Case 1, and readings showed on D4 a positive patch test only to the hand cream (++) (Figure 1B); there was no positive reaction to the face cream. A repeated open application test (twice daily on his forearm),⁷ with the face cream revealed, after 4 days, a purpuric erythematopapular reaction (Figure 1C). Additional patch tests with the ingredients of both products (obtained from both manufacturers) showed a positive reaction (+) to the common ingredient chlorphenesin (0.3% aq.). The patient also tested positively to limonene hydroperoxides (+), thiuram mix (+), and Myroxylon pereirae resin (+), considered irrelevant for the current ACD.

DISCUSSION

Chlorphenesin (CAS 104-29-0) is used as an anti-microbial in cosmetic products. Although cross-reactivity is possible with mephensin, a muscle relaxant, no previous contact with this topical drug was evident in our patients, indicating that primary sensitization occurred to chlorphenesin from its presence in (dermo)cosmetic products. To date, only