

Contact dermatitis from prilocaine with cross-sensitivity to pramocaine and bupivacaine

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Case Report

A 76-year-old man with a 2-year history of ischaemic ulcer on his right leg developed an itchy, vesicular eczematous reaction over the ulcer area. In the last 6 months, he had been alternatively treated with several topical antiseptics and antibiotics (povidone iodine, chlorhexidine, fusidic acid, and mupirocin). To reduce the pain, EMLA cream was applied daily be-

fore healing the ulcer with these topical treatments.

Patch tests with the European standard series and topical antimicrobials were negative. A +++ reaction was observed to EMLA cream at D2 and D4. Subsequently, the constituents of EMLA (prilocaine, lidocaine, and castor oil) were tested, as well as other local anaesthetics such as mepivacaine, articaine, pramocaine, bupivacaine, benzocaine, procaine, and tetracaine. Patch tests showed a strong positive reaction to prilocaine, bupivacaine, and pramocaine, the rest being negative (Table 1).

Discussion

EMLA is a eutectic mixture of both the amide anaesthetics, prilocaine and lidocaine. It is widely used to relieve the pain in superficial surgical procedures. Few previous reports of primary contact allergy to prilocaine from EMLA have been described. These cases occurred after topical use of EMLA for an arterial ulceration (1), postherpetic neuralgia (2), haemodialysis fistula (3), and iron subcutaneous injections (4). As in our case, these patients did not react to lidocaine. Other caines were not tested in these reports. Our patient also reacted to pramocaine and bupivacaine. Because no previous exposure to these drugs had occurred, positive patch tests suggest cross-sensitivity among these local anaesthetics.

Some reports of contact allergy to lidocaine have showed positive tests to prilocaine and other caines (5–8). Amide anaesthetics have molecular similarities with a common aromatic lipophilic part that has been postulated as responsible for cross-reactivity among them (9). However, as in previous reports, our patient did not react

Table 1. Results of patch testing

Anaesthetics	Manufacturers	Readings	
		D2	D4
EMLA cream	Astra Zeneca®	++	+++
Prilocaine 5% pet.	Bial Aristegui®	+++	+++
Lidocaine 1% pet.	Bial Aristegui®	–	–
Mepivacaine 1% aq.	Martí Tor®	–	–
Articaine 4% aq.	Inibsa®	–	–
Pramocaine 1% pet.	Isdin®	+	+
Bupivacaine 0.25%aq.	Inibsa®	+	+
Benzocaine 5% pet.	Martí Tor®	–	–
Procaine 1% pet.	Bial Aristegui®	–	–
Tetracaine 0.75% pet.	Organon®	–	–

to all amides. In addition, he reacted to pramocaine that actually is neither an amide nor an ester anaesthetic (10).

Therefore, because cross-sensitivity patterns among these topical drugs are not clearly defined, it could be interesting to test different local anaesthetics in patients with a history of contact allergy from prilocaine or other caines.

Our patient is now receiving 5% lidocaine with good tolerance.

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