A 75-year-old man with a history of type 2 diabetes, hypertension, and hypercholesterolaemia presented with a chemical burn of the right foot, involving the dorsum (Figure 1), instep and medial aspect (Figure 2) after accidental exposure to undiluted Dettol®. There was discoloration, extensive blistering and tissue necrosis of the skin and underlying tissue. He had accidentally tipped Dettol onto his shoe the previous day while cleaning floors with a mop, and had worn the Dettol contaminated shoe for a few hours. He had not washed his foot before going to bed.

He was admitted to hospital under the care of the diabetes team and antibiotic therapy was instituted to treat associated cellulitis. He was treated with IV piperacillin/tazobactam which was later converted to oral flucloxacillin and penicillin V. Wounds were dressed with medical grade honey and non-adherent dressings. Superficial wound swabs were negative for specific organisms. After deroofing the blisters and excising superficial dead tissue, extensive second degree soft tissue injury was found requiring skin grafting. He was thus transferred to a specialist plastic surgical unit for further management.

He underwent an angiogram to assess his limb perfusion, and no significant flow-limiting stenosis was noted. He underwent split-thickness skin grafting to the affected areas with good recovery in the postoperative period. After discharge he had regular input from district nurses for the application of moisturisers and Tubigrips to aid hydration and reduce limb swelling. Ten months later he was discharged from the burns clinic as the graft had demonstrated good healing, and maturation with no evident complication such as scarring, displacement or contraction etc. (Figures 3 and 4.)

Discussion

Dettol is a liquid antiseptic agent commonly used to clean cuts and wounds. It contains chloroxylenol (C₈H₉ClO), which is the active ingredient conferring its antiseptic property. The product information recommends diluting it before application. There is no publication in the medical literature on the ill effects of Dettol in patients with diabetes. Domestic cleaning agents such as bleach, detergents, and other cleaning agents have been commonly implicated in the causation of chemical injury. This can occur in the form of a rash, dermatitis, or deep tissue injury such as cellulitis and burns. Other health care products have been reported to cause mucosal or skin injury.¹ ²

Chemical burns occur when potentially corrosive substances come into contact with living tissues. These substances can be in the form of acids, bases, solvents, reducing agents and miscellaneous chemical agents. Patients with diabetes are at higher risk of chemical burns due to multiple factors such as microvascular disease, neuropathy and impaired healing. Our patient has diabetic peripheral neuropathy and lacked perception of the noxious agent on immediate contact. Hence this led to prolonged exposure to undiluted Dettol that resulted in extensive damage.

It is important that we advise caution to patients with diabetes when using antiseptic agents. Wearing gloves to minimise direct contact, using diluted forms of antiseptic solution and rinsing the exposed area after accidental exposure can prevent tissue injury.

Superficial burns are managed by general practitioners in primary care but suspected deeper chemical burns and scalds should be referred to a specialist burns unit for assessment of the depth and extent of the injury.³ Delayed presentation increases the risk of infection and reduces the chances of wound healing.

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References are available at www.practicaldiabetes.com.
Diabetes vignette

'Dettol foot' in a patient with diabetes

References