

Photodermatitis caused by torasemide

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Conflict of interests: none to declare.

KEY WORDS: photo-contact dermatitis, torasemide, case report, heart failure

Torasemide, also known as torsemide in the USA, is a loop diuretic used alone or in combination with other antihypertensive medications to control high blood pressure and congestive heart failure. It is a sulfonyleurea type diuretic, like also furosemide and hydrochlorothiazide. Photosensitivity is a well-known adverse effect of this pharmaceutical class.

CASE REPORT

A 71-year-old woman with a history of congestive heart failure and occupational squamous cell carcinomas developed a cutaneous eruption on her arms after gardening in late April 2019. Her legs had been covered by pants. There was no history of exposure to plants with phytoallergic or –toxic potential. The patient presented blisters, erosions, erythema, and crusts at the dorsal aspect of both hands and forearms, on her palms, and at the back of her neck – photo-exposed areas of the skin –, causing pruritus and pain (Fig 1; photo was taken 2 days after the first presentation). Skin edema was intense, not allowing her to form a fist. Two weeks before, torasemide 10 mg daily had been added to her regular medication comprising amlodipine 5 mg, losartan 100 mg, pantoprazole 20 mg, and simvastatin 20 mg in order to improve edema of the lower extremities. There had been no other change in medication. Neither drug-related reactions nor contact dermatitis had occurred before the present event.

The use of torasemide was discontinued and the patient was treated with prednisolone orally, starting with 1 mg/kg, reducing the daily dosage subsequently within one week. Betamethasone 0.05 % ointment and antiseptic wet dressings were applied topically. Within 2 weeks the skin lesions resolved. The cardiologist replaced torasemide by spironolactone 25

mg per day. To date, no recurrence was observed despite the fact that the patient is still on amlodipine, losartan, pantoprazole, and simvastatin, and is exposed to sunlight.

DISCUSSION

Our patient was diagnosed with a photosensitivity reaction to torasemide. Such a case has been reported only once in the literature by the Mayo Clinic, Rochester, Michigan (1). The temporal association of the skin lesions to therapy and the rapid clearance of the skin after discontinuing the culprit medication proves a drug-induced reaction. The role of ultraviolet light in the evolution of the rash was supported by its photo-distribution.

The potential of sulfonylurea-type loop diuretics to provoke photodermatitis has been known for more than 60 years (2, 3). The molecular structure of torasemide (Fig2) is similar to that of hydrochlorothiazide (Fig 3), which has similar pharmacological properties and shares this side effect. Cross-sensitization among sulfonamide-type substances has been documented. Therefore, such possible adverse reactions are mentioned in the pharmaceutical data sheet.

Torasemide was approved by the Food and Drug Administration in the USA for the treatment of edema associated with congestive heart failure, renal dysfunction, and hepatic disease in 1993 (4). After oral administration, it is rapidly absorbed and is known for its high bioavailability. It inhibits NaCl reabsorption in the medullary portion of the thick ascending limb of the loop of Henle (5). In comparison with equipotent doses of furosemide, it produces a more prolonged water and electrolyte diuresis but does not increase kaliuresis to the same extent (6).

Phototoxic skin reactions due to torasemide may be underreported. This loop diuretic is used widely in cardiology. Management is simple by replacing this medication by another substance like spironolactone which does not belong to the sulfonylurea class.

FIGURE 1: Photodermatitis on both forearms and back of the hands, 3 days after gardening

FIGURE 2: Molecular structure of torasemide

FIGURE 3: Molecular structure of hydrochlorothiazide

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