ADVERSE DRUG REACTIONS, INCLUDING SJS, TEN

SUCCESSFUL TREATMENT OF TERIFLUNOMIDE-INDUCED TOXIC EPIDERMAL NECROLYSIS WITH ACCELERATED ELIMINATION OF THE MEDICATION AND CYCLOSPORINE

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Background: Teriflunomide is a disease-modifying therapy for relapsing forms of multiple sclerosis (MS).We report the first case of teriflunomide-induced TEN successfully treated with accelerated elimination of the medication and cyclosporine.

Observation: A 22-year-old Somali man with relapsing-remitting MS presented with pain, swelling, and desquamation involving his lips, mouth, and truncal skin. He had been taking teriflunomide for four months, and reported no other medications/supplements. Examination showed mucosal desquamation and tender, dusky macules, bullae, and erosions involving 15% body surface area (BSA). The severity-of-illness score for Toxic Epidermal Necrolysis (SCORTEN) was 0. Teriflunomide plasma concentration was therapeutic, and teriflunomide was discontinued. Skin biopsy for histology showed full thickness epidermal necrosis and vacuolar interface dermatitis consistent with TEN. In addition to supportive cares, he was initiated on oral cholestyramine 8g three times daily and cyclosporine 5 mg/kg/day in divided doses for ten days total. Over three days, he progressed to 60% BSA involvement and SCORTEN of 1. He required enteral nutrition and surgical debridement but ultimately improved.

Key message: SJS and TEN are life-threatening epidermolytic mucocutaneous reactions. Patients exposed to causative drugs with long half-lives have an increased mortality. Clinicians must be aware of the pharmacokinetics of the culprit agent to ensure accelerated elimination techniques are implemented if required.
Teriflunomide is excreted in bile, undergoes enterohepatic recirculation, and has an elimination half-life of 19 days. This continues to expose the patient to the medication even after discontinuation. Therefore, accelerated elimination with either cholestyramine, a bile acid binding resin, or activated charcoal is recommended. Without accelerated elimination, it can take several months to years for teriflunomide concentrations to reach below 0.02 µg/ml. Furthermore, cyclosporine is one of the most promising systemic immunomodulating therapies for SJS/TEN. To the knowledge of the authors, this case is the first reported and successfully treated teriflunomide-induced TEN.