

## Stevens-Johnson Syndrome Due to Strontium Ranelate

### Dear Editor,

We report a patient who developed Stevens-Johnson syndrome secondary to strontium ranelate. A 67-year-old Chinese female presented with painful oral erosions 3 weeks after being started on strontium ranelate for post-menopausal osteoporosis. Prior to this, she had been on anti-hypertensive treatment for the past 10 years with no other new medication introduced. Physical examination showed confluent erosions on the lips and ulceration over the buccal mucosa and soft palate (Fig. 1). There were a few scattered purpuric macules over her chest and palms. Nikolsky's sign was negative. A small erosion was seen over her left labia majora. Ophthalmologic examination did not find any eye involvement. Skin biopsy done over the purpuric macules on her chest showed epidermal necrosis, neutrophil aggregates in the stratum corneum as well as perivascular inflammatory infiltrate, predominantly lymphocytes. Subepidermal vesiculation was also seen (Fig. 2, magnification 20x). Other laboratory investigations including full blood count, eosinophil count and liver panel were normal. Swabs taken from the oral erosions were negative for herpes simplex infection.

A clinical diagnosis of Stevens-Johnson Syndrome (SJS) was made. As strontium ranelate was the only new medication introduced, it was the most likely putative drug. It was discontinued immediately. She was treated with

systemic steroids – initially intravenous hydrocortisone 100 mg 8-hourly for 3 days, followed by oral prednisolone 50 mg a day – as well as topical triamcinolone oral paste and an antiseptic mouthwash. She responded well to treatment.

Strontium ranelate is a relatively new medication for the treatment of post-menopausal osteoporosis. It simultaneously increases bone formation and decreases bone resorption, thus rebalancing bone turnover in favor of bone formation.<sup>1</sup> Drug rash with eosinophilia and systemic symptoms (DRESS) related to strontium ranelate<sup>2,3</sup> has been well documented in the literature with more than 15 cases reported in Europe, including 2 deaths, prompting European health authorities to publish a warning concerning the risk of strontium ranelate-induced DRESS.<sup>4</sup> Toxic epidermal necrolysis (TEN)<sup>5</sup> and generalised exfoliative dermatitis<sup>6</sup> caused by strontium ranelate have also been reported, but none so far on SJS.

In contrast, allergy or adverse cutaneous drug reactions to bisphosphonates, which has been widely used for the past 2 decades, are very infrequent and are thought to be IgE-mediated.<sup>7</sup> Alendronate, an aminobisphosphonate, also induces histidine decarboxylase, the enzyme that leads to histamine formation. Maculopapular rash<sup>8</sup> and urticarial eruption<sup>7</sup> secondary to alendronate use have been reported in the literature.

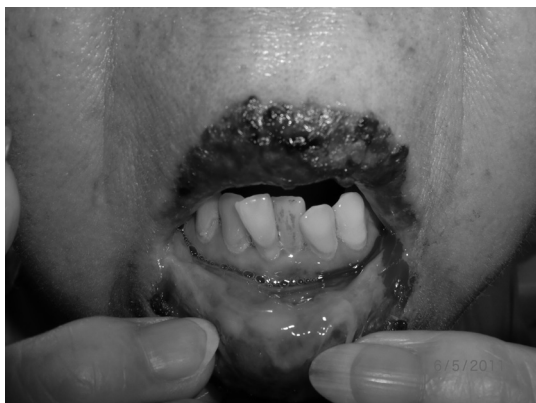


Fig. 1. Photograph showing erosions on the lips and ulceration over the buccal mucosa.

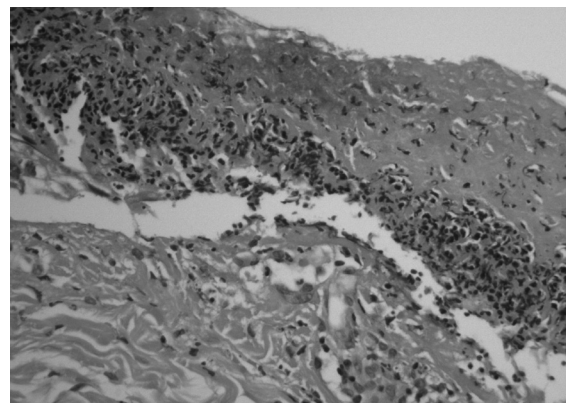


Fig. 2. Histology showing epidermal necrosis, neutrophil aggregates in the stratum corneum and subepidermal vesiculation.

Bisphosphonates are currently regarded as the mainstay of treatment of post-menopausal osteoporosis. Recent NICE (National Institute for Health and Clinical Excellence) guidelines<sup>9</sup> have recommended that strontium ranelate be used as a second-line agent for patients who are unable to tolerate the upper gastrointestinal side effects of bisphosphonates or comply with the special instructions for the administration of bisphosphonates.

This case report adds to the spectrum of cutaneous drug reaction seen in strontium ranelate and aims to alert prescribers to its potential cutaneous adverse events.

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