Correspondence

Varicella Infection: A Rare but Important Consideration in a Toxic Epidermal Necrolysis-like Eruption

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Indian J Dermatol 2020:65(4):327-8

Sir,

An 83-year-old gentleman was referred to the dermatology department for a 2-day history of fever and blisters over the trunk, face, and scalp.

Eight days before his current presentation, he was treated for a catheter-related urinary tract infection with 2 days of piperacillin-tazobactam and 4 days of ertapenem followed by another 8 days of co-amoxiclav.

Initial examination revealed multiple erosions on the upper chest with tiny tense vesicles on the abdomen. Several tense bullae were present over the right thigh, left abdomen, and buttock. There were no mucositis and no necrolysis at that point.

A provisional diagnosis of bullous pemphigoid was made. Biopsy for histology and direct immunofluorescence (DIF) was performed.

On the following day, the patient’s skin condition had deteriorated. Examination revealed dusky necrolytic patches over the chest, abdomen, back, and bilateral thighs with multiple erosions [Figures 1 and 2].

Multiple erythematous papules and vesicles were present on the scalp, face, trunk and upper limbs [Figure 3]. There was no mucosal involvement. Body surface area of the involved and detachable skin was 60% and 40%, respectively.

A revised diagnosis of toxic epidermal necrolysis (TEN) possibly secondary to beta-lactam was made.

He was transferred to the burn unit for wound care. Ophthalmological consultation was sought, showing only cataracts. Cyclosporine was started at a dose of 3 mg/kg/day.

Atypical features in his presentation including the lack of mucositis and the presence of multiple vesicular lesions on the face led us to consider alternative diagnoses, and a varicella-zoster virus (VZV) polymerase chain reaction (PCR) was performed.

On the 4th day of his presentation, the histology results returned with features consistent with herpesvirus infection. Intraepidermal vesiculation, epidermal necrolysis, and acantholysis were demonstrated with ballooning degeneration of keratinocytes, ground-glass intranuclear inclusions, and multinucleated giant cells [Figure 4]. DIF was negative. On the same day, the VZV PCR results also returned positive, establishing the diagnosis of varicella infection.

Figure 1: Dusky erythematous patches over the chest, abdomen, and thighs with necrolysis and multiple erosions

Figure 2: Extensive dusky patches over the back with multiple areas of denuded skin

Figure 3: Multiple small vesicles present over the scalp and face
Intravenous acyclovir was started at 10 mg/kg every 12 h and continued for 14 days. Cyclosporine was stopped immediately. Unfortunately, due to comorbidities, he eventually succumbed to septic shock from a subsequent urinary tract infection.

TEN is a life-threatening mucocutaneous disease that is nearly always drug related. Mimickers of TEN include immunobullous diseases, bullous lupus erythematous, staphylococcal scalded skin syndrome, generalized fixed bullous drug eruption, as well as acute generalized exanthematous pustulosis,[1] but varicella has not been reported to cause a TEN-like eruption.

Distinguishing between the two conditions is especially important, given that most treatment options for TEN including corticosteroids, intravenous immunoglobulin, cyclosporine and etanercept[2] have the potential to induce immunosuppression and potentially worsen varicella infection.

There are a few atypical features which led us to consider an alternative diagnosis.

Firstly, mucositis which is reported in 90%–100% of patients[3] was absent despite florid and extensive necrolysis.

Secondly, bullae form over necrolytic skin in TEN due to fluid filling the space caused by the necrotic epidermis detaching from the dermis. In this patient, small tense vesicles were seen over intact, non-necrolytic skin which was more suggestive of spongiosis.

Thirdly, in our patient, tense bullae and small vesicles occurred before necrosis of the skin developed. As bullae in TEN result from the detachment of the necrotic epidermis, necrolysis should therefore precede bullae formation.

Two other possibilities for this presentation exist as follows: firstly, TEN triggered by the varicella infection and secondly, TEN caused by the use of antibiotics for his previous infection with coincidental varicella infection. Both of these scenarios are less likely due to the atypical features as mentioned above, particularly the lack of mucositis. Histology also shows the presence of ballooning degeneration, a hallmark of herpesvirus infections, as well as an absence of interface dermatitis which is seen in TEN.

In summary, severe atypical varicella infection is a rare cause of a TEN-like eruption, and it is important to consider this entity particularly when patients have atypical features such as lack of mucosal involvement, presence of small tense vesicles, and an unusual clinical course.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

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How to cite this article: Chia BK, Busmanis I, Wei YY, Pang SM. Varicella infection: A rare but important consideration in a toxic epidermal necrolysis-like eruption. Indian J Dermatol 2020;65:327-8.

Received: August, 2018. Accepted: October, 2018.