A Vesiculopustular Skin Eruption

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CASE PRESENTATION

A 69-year-old female with no significant past medical history presented with tender, flaccid vesiculopustules and bullae located on the right lower and mid back, bilateral upper arms, and left thigh [**Figure 1**]. No new medications had been prescribed several months prior to presentation. She had no systemic symptoms and Nikolsky's sign was negative. She was prescribed clobetasol 0.05% ointment twice daily for two weeks. One month later, the lesions on her back had improved; however, new lesions had developed in the right axilla, bilateral medial thighs, right rib cage, and abdomen [**Figure 2**]. Punch biopsies of the right superior and inferior axillary vault were performed for Hematoxylin and Eosin and Direct Immunofluorescence. Pathology demonstrated subcorneal vesiculopapule with intraepidermal neutrophils and eosinophils consistent with subcorneal pustular dermatosis.

SPD, also known as Sneddon-Wilkinson disease, is a rare chronic vesiculopustular condition. It typically presents as sterile pustules in an annular pattern on the trunk, proximal extremities, and flexural regions while sparing the face, palms, and mucosa. It is most commonly seen in women over the age of 40 and has an unknown etiology.[1,2] Diagnosis is made through biopsy. Histopathologic examination shows subcorneal pustules filled with neutrophils and occasional eosinophils sitting atop the epidermis. In addition to neutrophils and occasional eosinophils, in older lesions, a rare acantholytic cell may be present as well. There are no mitotic features seen in the epidermis and within the underlying dermis, mixed superficial perivascular inflammatory cell infiltrate is present. Direct and indirect immunofluorescence are generally negative.[2]

When evaluating vesiculopustular eruptions on the trunk, upper arms, and legs, it is important to consider a broad differential diagnosis, as a variety of dermatologic conditions can present with similar morphologies. Common considerations include acne vulgaris, folliculitis, and generalized pustular psoriasis.

Figure 1. A woman with scattered vesicles and pustules on her bilateral upper abdomen.

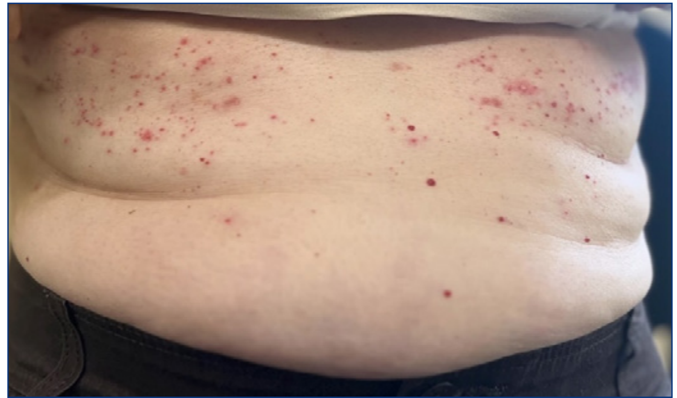
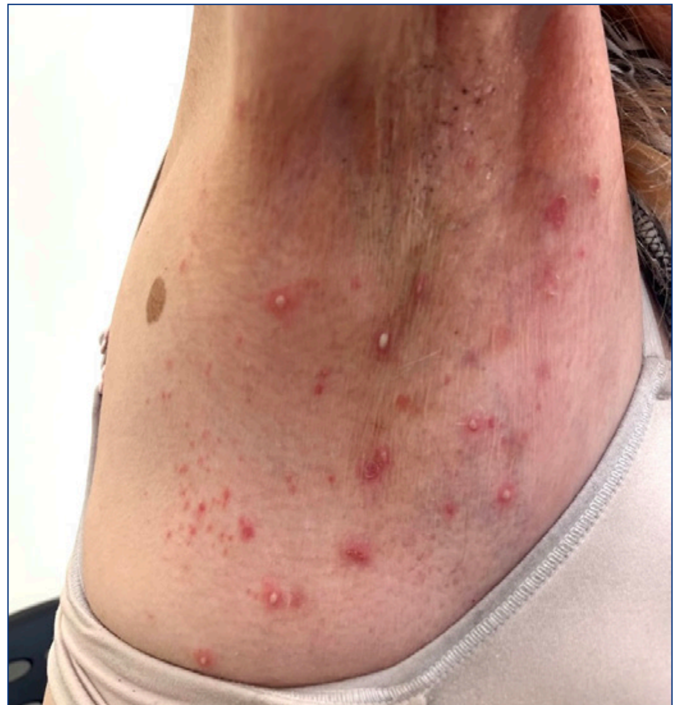


Figure 2. A woman with vesicles and pustules in her right axilla.



Acne Vulgaris is a chronic condition characterized by pustules and papules on the face, neck, and trunk. It is caused by inflammation of the pilosebaceous unit and involves many factors including hormones increasing sebum production,

hyperkeratinization of the follicle, and the presence of *Cutibacterium acnes*. Unlike SPD, acne is more common in adolescents and young adults. Histopathology shows a dilated follicle with keratin plug and can show signs of surrounding inflammation.[3]

Folliculitis is a common condition caused by the inflammation of hair follicles which can arise from infectious and noninfectious origins. It presents as inflamed pustules or papules anywhere there are hair follicles. These lesions differ from SPD in that they center around hair follicles. Noninfectious folliculitis is often due to friction while infectious folliculitis can be due to superficial or deep bacterial, fungal, or viral causes. Histologic evaluation shows lymphocytic inflammatory infiltrates near hair follicles.[4]

While both Generalized Pustular Psoriasis (GPP) and SPD can present with a widespread pustular eruption, GPP is also often accompanied by systemic symptoms, such as fever and malaise. GPP is also similarly predominantly diagnosed in women around 50 years of age. GPP is suspected in patients with a family history of psoriasis or physical exam findings consistent with psoriasis. The flares of GPP, commonly after a patient with psoriasis is given systemic steroids, can be life threatening if left untreated as it can lead to complications such as cardiovascular failure and sepsis.[5]

Given the broad range of potential diagnoses, careful clinical evaluation is essential when assessing vesiculopustular eruptions on the trunk and extremities. Recognizing subtle differences in lesion morphology, distribution, and associated symptoms can help narrow the differential and guide appropriate management. As primary care and urgent care/emergency room clinicians are typically the first to see these patients, we recommend increasing their level of suspicion when pustules in an annular pattern on found on the trunk, particularly in females above the age of 40.

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