Neutrophilic Eccrine Hidradenitis Spectrum

INTRODUCTION

- Neutrophilic eccrine hidradenitis (NEH) is an uncommon neutrophilic dermatosis of the eccrine sweat glands. NEH was most often reported in adult patients receiving induction chemotherapy. Notable, cytotoxic therapy for acute myeloid leukemia (AML) characterized by self-limited eruption of erythematous papules and plaques.1
- NEH has since been described in association with other malignancies, infection, and following the ingestion of related immunomodulators and acetaminophen.2
- Featured is a case of NEH presenting as a persistent polymorphous eruption in a child receiving intensification chemotherapy for an even rarer, underlying Philadelphia-chromosome positive acute lymphoblastic leukemia.

PRESENTATION

- An 8-year-old Hispanic male with Ph+ ALL presented to the emergency department with a two-day history of fever and rash on the extremal arms, cheeks, lower trunk, and legs which began within two hours of leucovin infusion, nearly 2 days following administration of methotrexate and cytarabine.
- Additional history included sulfur-induced urticarial eruption, seizure disorder, recurrent pneumonia and otitis media, asthma, and anemia requiring multiple transfusions.
- Home medications included dasatinib, levetracetam, and acetaminophen.
- Physical examination revealed symmetric, non-tender, blanchable, edematous, erythematous, follicular papules and plaques with central dusky coloration of the extremal arms, lower back, buttocks, anterolateral thighs, and lateral lower legs (Figure 1-3). Pinpoint, skin-colored to pink follicular papules and pustules of the cheeks, extremal arms, and abdomen (Figure 4), superficial erosions with hemorrhagic crusts of the lower lip and a pink velvety dorsal tongue were also noted. Scalp alopecia prominent. Palms and soles were spared.
- Histology showed hyperkeratosis, clumping below the granular layer, vascular interface dermatitis, follicular plugging, dyskeratotic cells and neutrophils within eccrine gland coils (Figure 5-6). Culture and DIF negative.
- Laboratory tests revealed leukopenia with neutropenia, lymphocytosis, mild monocytosis, anemia, thrombocytopenia, elevated transaminases, hypoproteinemia, and hypoalbuminemia.
- Renal function tests, CRP, coagulation profile, cultures, and chest radiograph were unremarkable.
- Serology negative for anti-streptolysin O, human immunodeficiency virus-1/2, hepatitis B and C virus, Mycoplasma pneumoniae IgM, parvovirus B19, Epstein-Barr virus.
- PCR negative for parvovirus, adenovirus, cytomegalovirus, human herpes virus-1/2/6/7, and enterovirus.
- Bone marrow aspiration revealed minimal residual disease with erythroid and granulocytic hyperplasia.
- Findings were consistent with NEH, and in all likelihood, the result of cytarabine. However, methotrexate as the offending agent could not be excluded. Further, dasatinib has been reported to cause follicular papular and pustular eruptions, similar to the acniform and keratotic pilaris-like eruption seen in our patient.
- Treatment included empiric antibiotics and antifungals pending negative cultures and topical corticosteroid.
- One month later, the patient presented to the dermatology clinic with minimal improvement of the eruption and was started on oral prednisolone to further facilitate recovery.

REFERENCES