Sezary syndrome with granulomatous tissue reaction

N M Nagodavithana[1], P L A N Liyanage[2], M V C De Silva[3], G M P Sirimanna[4]

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Introduction

Sezary's syndrome (SS) is a leukaemic variant of cutaneous T-cell lymphoma (CTCL) initially presenting in the skin and peripheral blood.

SS typically arises de novo in a short time period, although some patients may have a prodrome of pruritus and nonspecific dermatitis.

The typical histological features of SS include a subepidermal infiltrate composed of small cerebriform lymphocytes with variable degree of epidermotropism.

"Granulomatous mycosis fungoides" (GMF), at term coined by Ackerman and Flaxman in 1970, is a rare histopathologic variant of MF characterized by a prominent granulomatous infiltrate, distinct from granulomatous slack skin clinically and histologically.

Association of SS and granulomatous reaction seems to be exceptionally rare, with only a few cases reported. Reported patients of Sézary syndrome with granulomatous changes showed rapid progression with a fatal outcome.

Case history

A 68 year old female presented with worsening pruritus for 2 years with erythoderma for 1 year. Her face and limbs were edematous and face appeared infiltrated and mild ectropian was noted. Her palms and soles showed fissured hyperkeratosis with thickened pigmented brittle nails. She was also pale and had generalized lymphadenopathy but no hepatosplenomegaly (Figure 1,2).

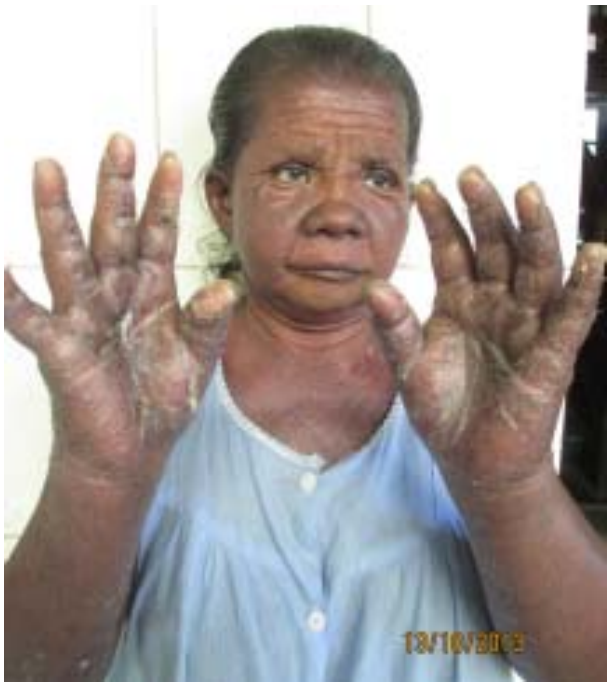

Figure 1.

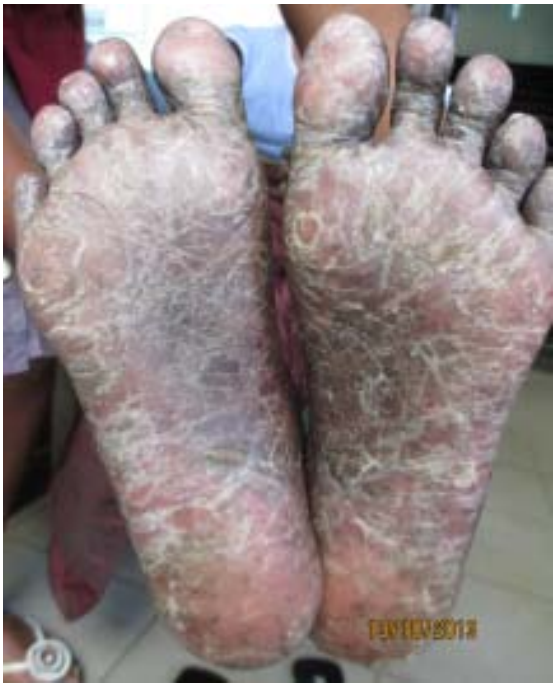

Figure 2.

[1]*National Cancer Institute of Sri Lanka,* [2]*Department of Community Medicine, Faculty of Medicine, University of Ruhuna, Galle, Sri Lanka,* [3]*Department of Histopathology, Faculty of Medicine, Colombo, Sri Lanka,* [4]*Formerly at Department of Dermatology, National Hospital of Sri Lanka.*

Skin Biopsy: Epidermis showed hyperkearatosis, parakeratosis, irregular acanthosis and spongiosis. Dermis showed a dense inflammatory infiltrate of lymphocytes foamy histiocytes and multiple Langerhans giant cells. Some lymphocytes were large and atypical with irregular nuclei. Marked epidermotrophism with focal destruction of the basal layer was seen (Figure 3). Special stains for acid-fast bacilli, fungi were negative.

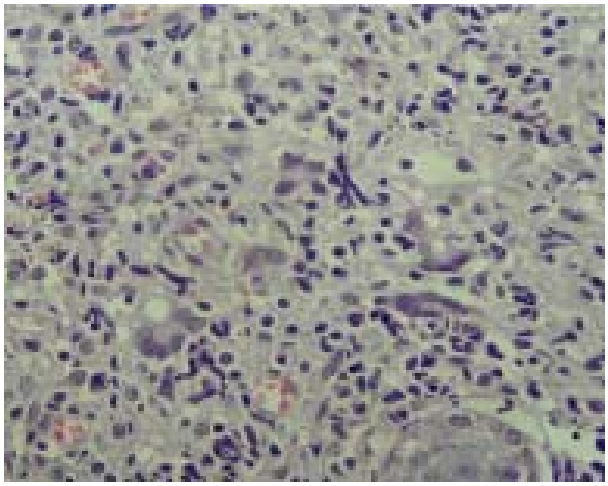

Figure 3.

Immunohistochemistry revealed the atypical lymphocytes in the dermis and the epidermis to be positive for CD3, CD4 and CD8 and negative for CD20 and CD 30.

Her blood picture showed atypical lymphocytes and Flowcytometry for peripheral blood revealed a population of mature T cells with aberrant loss of CD5 and CD7 together with CD4: CD8 ratio over 30; all compatible with Sezary syndrome.

Lymph node biopsy too revealed atypical lymphocytes.

Her bone marrow biopsy showed hypercellular marrow without evidence of infiltration.

Although she was started on systemic chemotherapy by the oncologists shortly after diagnosis, she failed to respond and died after 3 months of diagnosis.

Discussion

SS is a rare disease accounting for less than 5% of all CTCL. It usually arises de novo in a short period of time as in our patient in contrast to Erythrodermic Mycosis Fungoides which is due to progression of classic MF.

Diagnosis of SS requires erythroderma with high blood tumor burden (B2) in contrast to erythrodermic mycosis fungoides where the blood tumor burden may be absent or low (B0 or B1).

Our patient showed expanded CD4+ T cells (61%) with abnormal immunophenotype including loss of CD5 (92%) and CD7 (80%) with CD4/CD8 ratio over 30 compatible with high blood tumor burden of SS.

GMF is an uncommon histopathological variant of MF, while Granulomatous Sezary Syndrome is exceptionally rare. Diagnosis of GMF remains challenging, mainly because of variable clinical and histopathologic features that mimic benign granulomatous disorders.

Our patient's skin biopsy showed the classical granulomatous histology admixed with atypical lymphocytes. Furthermore, epidermotrophism was striking, which is usually not prominent in classic SS.

Repeatedly negative acid-fast bacilli and fungal stains ruled out more common infectious causes for granuloma formation.

Patients with granulomatous MF progress more frequently with poorer responses to skin-directed therapies and therefore early systemic therapy is warranted. Despite prompt diagnosis and commencement of systemic chemotherapy within 3 weeks of initial presentation, patient died after few cycles of chemotherapy in keeping with grave prognosis of GMF.

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