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Unusual Cause of Persistent Anemia and Failure to Thrive in an Infant – A Clinical Case Letter

Ashwini VK[1], Akshay H[1], Ramkumar R[2] and Janani S[1]*

[1]Department of Pediatrics, Kanchi Kamakoti CHILDS Trust Hospital, Chennai, India

[2]Department of Pediatric Dermatology, Kanchi Kamakoti CHILDS Trust Hospital, Chennai, India

Abstract

Tuberculosis is considered the national disease of India. However less is known about tuberculid, the cutaneous manifestation of tuberculosis. It is uncommon and easily misdiagnosed. Lichen scrofulosorum is a tuberculid, presenting with papules that are non-tender and are misdiagnosed as keratosis pilaris or any other follicular lesion. A ten-month-old infant was presented with signs and symptoms consistent with community acquired pneumonia. She was treated for the same but was found to be failing to thrive and anemic at follow up one month later. Papular lesions on scalp and USG abdomen at follow up prompted further work up, in line of histiocytic disorder. FDG-PET CT was suggestive of tuberculosis. Antitubercular Therapy (ATT) was initiated and she showed excellent response to treatment. Child was kept under close follow up, she is seen to have good weight gain, and scalp lesions have resolved. Presence of diffuse acneiform lesions in a background of anemia and Failure to Thrive (FTT) should prompt the clinician to think beyond histiocytic lesions and rule out tuberculosis which is still very much prevalent in India.

Keywords: Tuberculid; Anemia; Failure to thrive; Acneiform lesions

Introduction

Tuberculosis is a chronic progressive mycobacterial infection, mostly affecting the lungs but also seen to have extrapulmonary involvement. Cutaneous subset of tuberculosis called tuberculid is a lesser-known entity with varied manifestations. One such manifestation seen in pediatric age group is Lichen scrofulosorum. It is characterized by acneiform popular lesions with or without other features of tuberculosis. It is considered an occult marker of tuberculosis, presenting in individuals with strong immune sensitivity to *Mycobacterium tuberculosis* [1,2]. In this case report, we describe the case of a 10-month-old infant who was evaluated for Lymphocytic histiocytosis but was diagnosed later as a case of lichen scrofulosorum.

Case Presentation

A ten-month female child, previously well with no significant past medical history presented with complaints of high-grade fever associated with cough of 1 week duration. She was treated elsewhere with antibiotics and presented to us with persistence of fever spikes. On examination, she was pale, afebrile with no signs of respiratory distress. She was also failing to thrive with height and weight below the 3rd centile for her age. Chest X-ray showed left retrocardiac consolidation. Laboratory picture showed anemia with leukocytosis. She was treated as a case of community acquired pneumonia with antibiotics and discharged after 48 h of afebrile hospital stay. She was started on iron supplements 2 weeks later in view of nutritional anemia. Nutritional rehabilitation was also advised.

Follow up at 1 month showed persistence of anemia despite starting her on adequate iron supplementation. Iron supplementation was increased with no response. Failure to thrive was persisting with no adequate weight gain. She was worked up for other causes but it was inconclusive.

At 12-months of age, she presented with complaints of acneiform lesions on scalp for the last 2 weeks that was being treated with topical antibiotic. The scalp lesions were not obvious on inspection but could be easily felt all over on palpation. It was non-tender with no signs of inflammation. An empirical diagnosis of lymphocytic histiocytosis was considered. USG abdomen showed mild hepatosplenomegaly with innumerable hypoechoic lesions, suggestive of infiltrative disorder. X-ray of the skull and pelvis were taken to look for lytic lesions, found to be normal.

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Correspondence:
Ashwini VK, Department of Pediatrics, Kanchi Kamakoti CHILDS Trust Hospital, Chennai 600034, Tamil Nadu, India,

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Figure 1: Maculopapular lesions on the scalp.

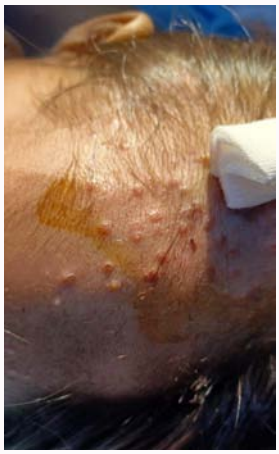
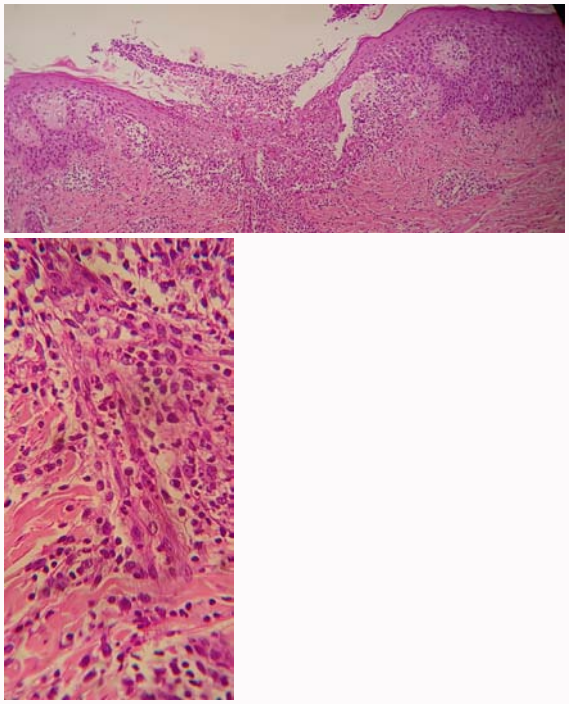


Figure 2: Close-up view of the lesion before proceeding with biopsy.



Figures 3, 4: Histopathological image showing granuloma formation with neutrophilic exocytosis.

After consultation with haemato-oncologist and dermatologist, skin biopsy of scalp lesion was planned for tissue diagnosis. Skin biopsy showed neutrophilic exocytosis with vague granuloma. There was no evidence of histiocytes. Immunohistochemistry for Langerhans Cell Histiocytosis (LCH) was also negative. However, FDG PET-CT was taken up to stage LCH since clinical trial of anemia, FTT and papular lesions on scalp were consistent with LCH. FDG-PET/CT detected metabolically active segmental consolidation in the superior segment of left lower lobe of the lung with active lesions in liver and spleen. The features were suggestive of tuberculosis. Mantoux was performed and showed a 15 mm induration at 51 h. An incidental diagnosis of tuberculid was picked up and she was started on ATT. GeneXpert MTB Ultra of resting gastric juice was positive without Rifampicin resistance. She is on regular follow up since making the diagnosis. She has adequate weight gain, papular lesions resolved 1 month after starting ATT. Anemia is corrected and child is thriving well (Figures 1-4).

Discussion

Lichen scrofulosorum, also known as tuberculosis cutis lichenoides, is a rare tuberculid presenting as asymptomatic, closely grouped papules. They are skin colored, perifollicular, found commonly on abdomen, chest and extremities. It is associated with a strongly positive tuberculin reaction [3].

The concept of tuberculids was introduced by Darier in 1896. A tuberculid is a cutaneous immunological reaction to an occult tuberculosis infection in patients with moderate to high immunity. Key characteristics of tuberculids include a positive tuberculin test, evidence of past or present latent tuberculosis, and a favorable response to antituberculosis treatment. Historically, many skin disorders were classified as tuberculids, but currently only three conditions are recognized as true tuberculids: lichen scrofulosorum, papulonecrotic tuberculid, and erythema induratum of Bazin. Other conditions, such as Lupus Miliaris Disseminata Faciei (LMDF), are termed pseudotuberculids because they do not respond to anti-tuberculous therapy despite having similar histological features.

Because of its subtle and asymptomatic presentation, it is usually missed or often misdiagnosed. It resembles other more common dermatological conditions such as keratosis pilaris, lichen nitidus, lichen spinosus, pityriasis rubra [4].

A high index of suspicion is required to make a prompt diagnosis as initiation of treatment is associated with resolution of the lesions.

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