

Case Report

Immune thrombocytopenic purpura with psoriasis: a rare association in children

Karthik V. Badarayan*, Jitendra S. Oswal, Sunil V. Kapur

Department of Pediatrics, Bharati Vidyapeeth Medical College and Hospital, Pune, Maharashtra, India

Received: 31 December 2020

Accepted: 30 January 2021

*Correspondence:

Dr. Karthik V. Badarayan,

E-mail: Karthik.vbadarayan@gmail.com

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ABSTRACT

Autoimmune thrombocytopenia (ITP) is one of the best characterized autoimmune diseases which is classified into primary (idiopathic) and secondary forms. A high index of suspicion is warranted for the diagnosis of secondary ITP. There is limited data on association of ITP with Psoriasis. We herein describe a 11 years old girl who presented with a rare association of ITP and Psoriasis who responded to oral steroids.

Keywords: Autoimmune thrombocytopenia, Psoriasis, Pediatrics

INTRODUCTION

It is known that approximately 80% of Immune thrombocytopenic purpura (ITP) patients suffer from the primary form and the remaining have a secondary form.¹ The diseases associated with the secondary form include lupus erythematosus (5%), infections like HCV, HIV, and Helicobacter pylori (6%), post-vaccination (1%), antiphospholipid syndrome (2%), lymphoma (2%) and Evans syndrome (2%).² It may take months or even years until the clinical manifestation of the associated disease becomes obvious. Eg. malignancies. However, systematic analysis of the incidence of secondary ITP is lacking.²

CASE REPORT

A 11 years old female child, presented with erythematous non pruritic scaly rash over her scalp, axilla and elbows since 1 month (Figure 1). This was followed by multiple petechial rash all over her body (Figure 2). No history of other bleeding manifestation, night sweats, oral ulcers, icterus, headaches, visual disturbances or joint swelling. Rest of her past and family history was unremarkable. Birth, development and immunization history was uneventful. Anthropometric parameters and vitals including blood pressure were normal. Clinical

examination revealed scaly dermatitis over her scalp, both the axillae and elbows along with multiple petechial rash all over her body and other systemic examination within normal limits. Laboratory investigations showed isolated thrombocytopenia (haemoglobin- 11.8 g/dl, total leukocyte count- 10000/cumm and platelets <10,000/cumm). Her coagulation tests were normal. Bone marrow examination findings were consistent with peripheral platelet destruction. For her scaly dermatitis, skin biopsy was done from her right axilla which showed parakeratosis and thickened projections of the prickle cell layer of keratinocytes suggestive of psoriasis [Figure 3]. Human immunodeficiency virus, Hepatitis B and Hepatitis C tests were negative. Thyroid function, Renal function and liver function tests were within normal range. Anti-nuclear antibody by Immunofluorescence method had insignificant titre (1:100). Erythrocyte sedimentation rate, C-reactive protein, C3 and C4 levels were normal. Direct coomb's test and Antiphospholipid antibody test was negative.

In our patient, ITP with Psoriasis was diagnosed based on isolated thrombocytopenia, bone marrow findings and skin biopsy proven psoriasis. She was started on oral prednisolone at 2 mg/kg/day and her subsequent platelet counts showed an improving trend as well her psoriatic

lesions regressed after starting treatment. We documented normalization of platelet count (1.6 lakh/ cumm) at 1 month of follow up after which steroids were tapered and omitted.



Figure 1: Psoriatic lesion over the axilla.



Figure 2: Petechial rash over the arm and forearm.

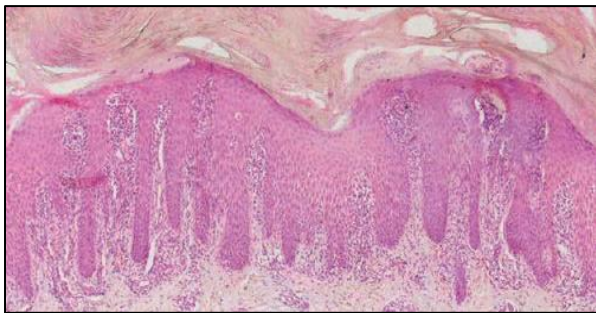


Figure 3: Skin biopsy of parakeratosis and micro abscesses suggestive of psoriasis.

DISCUSSION

In this case report, we focus on the occurrence and/or presence of secondary disease (Psoriasis) in our patient with ITP. Aboud et al., studied 386 patients of chronic ITP retrospectively.³ They found 11 patients associated with Psoriasis. Of which, 7 were diagnosed with ITP at a later point, while 4 of them received ITP as primary diagnosis and psoriasis as secondary diagnosis.³

Platelets are not only essential to haemostasis but also actively participate in immunity. There is no doubt that platelets play a key role in the immune continuum, including the release of various chemokines and cytokines.⁴ Platelets are known to mediate interaction with nearly all immune cells.⁴ Meanwhile, more than 1,000 proteins, of which 69 are membrane proteins, have been shown to be associated with platelets, and a large number of these molecules play a role in immune processes.⁵

The concept in ITP diagnosis, considers the associated disease as the primary one. This might be the case in many, but not in all instances. The manifestation of ITP may sometimes occur a long time prior to the manifestation of the associated disease. However, a true association between ITP and other diseases cannot be proven invariably due to the long period of time between occurrence and manifestation of the disease.³

CONCLUSION

We report this case to increase awareness amongst pediatricians, a rare association of ITP and Psoriasis in children. In the presence of ITP with any other systemic features, it is warranted to rule out association of secondary causes on ITP.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

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Cite this article as: Badarayan KV, Oswal JS, Kapur SV. Immune thrombocytopenic purpura with psoriasis: a rare association in children. *Int J Contemp Pediatr* 2021;8:588-9.