

# A Rare Case of Idiopathic Thrombocytopenic Purpura with Unusual Clinical Manifestations

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## Abstract

Idiopathic thrombocytopenic purpura (ITP) is an autoimmune condition marked by isolated thrombocytopenia, which makes people more likely to hemorrhage. We provide a case of a 45-year-old female patient with ITP who displayed unusual clinical symptoms, emphasizing the diagnostic difficulties and treatment options in such circumstances.

## Introduction:

Idiopathic thrombocytopenic purpura (ITP) is a very uncommon autoimmune condition that causes the blood's platelets to be destroyed, resulting in isolated thrombocytopenia and a higher risk of bleeding [1]. ITP's precise cause is still unknown, hence the term "idiopathic," however, it is thought to be caused by immune-mediated mechanisms. While petechiae, purpura, and easy bruising are the typical mucocutaneous bleeding signs of ITP, there are cases when individuals display unique clinical characteristics that make diagnosis difficult and necessitate specialised therapeutic approaches [2].

In this case report, we outline the situation of a 45-year-old female patient who had ITP and showed unusual clinical symptoms. She came with a generalised petechial rash throughout the extremities, oral mucosa, conjunctivae, and sporadic ecchymoses, as opposed to the traditional mucocutaneous bleeding signs [3]. This unique presentation emphasises the clinical diversity of ITP and the significance of considering manifestations other than common bleeding symptoms. In order to diagnose ITP, other causes of thrombocytopenia, including viral infections, medicines, and underlying hematologic abnormalities, must be ruled out. Laboratory tests, such as complete blood counts, peripheral blood smear analyses, and autoimmune markers, must confirm the diagnosis of ITP. To rule out other potential aetiologies, additional studies may be necessary in instances with atypical clinical characteristics [4]. To boost platelet counts and lower the risk of bleeding, ITP is managed. Observation, corticosteroids, intravenous immunoglobulin (IVIG), and immunosuppressive medications are all possible forms of treatment. The severity of the thrombocytopenia, bleeding symptoms, and the patient's features all influence the therapy option [5].

This case report emphasises the difficulties in detecting and treating ITP with unusual clinical presentations and emphasises the value of an all-encompassing strategy and customised treatment plans. Understanding the various ITP presentations helps enhance patient management and outcomes in this complex autoimmune condition.

## Case presentation:

A 45-year-old woman who had several petechiae and ecchymosis for one month came to our haematology clinic. Periodically, she would endure moderate gum bleeding and epistaxis. The patient denied having any recent infections, taking any drugs, or having a history of hematologic abnormalities. Upon physical examination, a petechial rash covering the conjunctivae, oral mucosa, and extremities was found as shown in Figure 1, in addition to sporadic ecchymoses. Organomegaly or lymphadenopathies were absent.



Figure 1: petechial rash covering extremities

**Investigations:** The first laboratory tests revealed severe thrombocytopenia with a platelet count of 10,000/mm<sup>3</sup> (the standard range is 150,000-400,000/mm<sup>3</sup>) and no abnormalities in the complete blood

count. Examination of peripheral blood smears revealed platelets of average size without any indication of clumping or dysplasia. The viral serologies, coagulation profile, liver function, and renal function tests were all within normal ranges. Antinuclear antibody (ANA), rheumatoid factor (RF), and anti-dsDNA tests performed as part of an autoimmune workup came out negative. To rule out any thrombocytopenia-related reasons, a bone marrow biopsy was done.

Idiopathic thrombocytopenic purpura (ITP) was identified based on the clinical presentation, test results, and exclusion of other causes. In addition to having isolated thrombocytopenia and being free of underlying causes or other autoimmune diseases, the patient met the diagnostic criteria for ITP.

**Treatment and Results:** The patient was initially handled conservatively with close observation due to the lack of obvious bleeding symptoms. However, intravenous immunoglobulin (IVIG) therapy was started since the severe thrombocytopenia persisted and recurrent epistaxis developed. With an increase in platelet count to 100,000/mm<sup>3</sup>, the patient responded well to IVIG. Following discharge, she was given oral corticosteroids for maintenance medication and a follow-up appointment schedule.

### Discussion:

Idiopathic thrombocytopenic purpura (ITP) is an autoimmune disease that causes isolated thrombocytopenia via immune-mediated platelet destruction. An increased propensity to bleed, which presents as petechiae, purpura, ecchymosis, and mucocutaneous bleeding, is the defining feature of ITP [6]. However, the case of a 45-year-old female patient with ITP highlights the existence of unusual clinical presentations that create diagnostic hurdles and necessitate specialised therapy approaches. The relevance of taking into account alternate manifestations of ITP is increased by the atypical appearance of broad petechial rash throughout the extremities, oral mucosa, and conjunctivae, as well as scattered ecchymoses, in the absence of typical bleeding symptoms. This emphasises the clinical variety of the illness, needing an extensive investigation to rule out other possible causes of thrombocytopenia and a broad differential diagnosis. In this instance, thorough laboratory tests, including viral serologies, coagulopathies, and other autoimmune diseases, were carried out to exclude underlying infections, coagulation profiles, and autoimmune markers [7].

A complete blood count, which reveals isolated thrombocytopenia, and a peripheral blood smear examination, which assesses platelet morphology and rules out platelet clumping or dysplasia, are often part of the diagnostic workup for ITP. The diagnosis of ITP was supported in this instance by the peripheral blood smear, which revealed normal-sized platelets. Antinuclear antibody (ANA) and rheumatoid factor (RF), two other autoimmune indicators, were negative, confirming the lack of an underlying autoimmune illness [8]. Increasing platelet levels and lowering the risk of bleeding are the goals of ITP management plans. Observing patients with mild thrombocytopenia and minor bleeding symptoms may be appropriate rather than seeking emergency medical attention. However, intravenous immunoglobulin (IVIG) was started to offer a quick increase in platelet counts due to the persistence of severe thrombocytopenia and the emergence of recurrent epistaxis in this case. The patient responded well to IVIG, resulting in a significant platelet count rise. After that, corticosteroids were recommended as maintenance therapy [9].

It is essential to tailor the course of treatment based on the patient's features, the degree of thrombocytopenia, and the presence of bleeding signs. Immunosuppressive medications, splenectomy, and more recent targeted therapy such as thrombopoietin receptor agonists are among the various treatments available for patients with refractory or chronic ITP [10]. This case report emphasises the difficulties in diagnosing when dealing with unusual clinical presentations of ITP. To make an accurate diagnosis, it highlights the necessity for a thorough evaluation that includes a complete medical history, physical examination, and laboratory tests. To achieve positive results and avoid life-threatening consequences linked to severe thrombocytopenia in ITP, tailored care techniques based on the patient's clinical presentation and disease history are essential.

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