



## IDIOPATHIC THROMBOCYTOPENIC PURPURA – A CASE REPORT AND MANAGEMENT OF ITP

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### ARTICLE INFO

### ABSTRACT

#### Key Words

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Idiopathic thrombocytopenic purpura (ITP) is a hematologic disorder. Patients with acute ITP can suffer from bruising, petechiae, nosebleeds and bleeding gums. As the platelet count is low, the blood clot formation becomes slow, which is essential to seal the small tear in the blood vessel wall, and results in prolonged bleeding. Case report: A 45 year old male patient with complaints of body ache, red rashes on abdomen since 2 days, admitted to the general medicine department. Blood investigation reveals that patient have thrombocytopenia. Two years back he had gum bleeding and he was diagnosed with idiopathic thrombocytopenic purpura from a government hospital. For further management he came to our hospital, as the part of management strategy oral corticosteroid T.methyprednisolone were started. Thrombocytopenia is a common finding in medical settings, occasionally associated with life threatening complication like bleeding. Here, we present a case of patient with ITP, treated with oral corticosteroid therapy and papaya leaf extract as adjuvant therapy. Monitoring of platelet level and adherence to the therapy properly done to prevent the remission of disease.

### INTRODUCTION

Idiopathic thrombocytopenic Purpura (ITP) is a hematologic disorder, where the blood doesn't clot normally. In this condition there is a low platelet count (thrombocytopenia) of no known cause (idiopathic). Most of the causes are related to antibodies against platelets and thus also known as Immune Thrombocytopenic Purpura.<sup>[1]</sup> ITP can result in severe bruising and bleeding. As the platelet count is low, the blood clot formation becomes slow, which is essential to seal the small tear in the blood vessel wall, and results in prolonged bleeding.<sup>[2]</sup> The normal platelet count is between 150,000 and 450,000/mm<sup>3</sup>. If its below 50,000/mm<sup>3</sup> there is a risk of dangerous bleeding from trauma, and if its below 20,000/mm<sup>3</sup> then there is increase risk of

Spontaneous bleeding.<sup>[1]</sup> Patients with acute ITP can suffer from bruising, petechiae, nosebleeds and bleeding gums. In extreme cases, bleed into lungs, brain, or other vital organs, leading to subarachnoid, intra cerebral hemorrhage or other internal bleeding can occur as serious complications.<sup>[1]</sup> In many cases ITP are due to an antiplatelet antibody, usually of IgG class, it coats autologous platelets and leads to their phagocytosis and destruction by reticuloendothelial system. Platelet associated IgG levels are seen higher in these patients with ITP.<sup>[3]</sup> Secondary causes include leukemia, medications, lupus erythematosus, cirrhosis, HIV, hepatitis C, congenital cause, antiphospholipid syndrome, von Willebrand factor deficiency and others. In patients with mild, asymptomatic thrombocytopenia, can be

discovered incidentally on a routine blood count.<sup>[1]</sup> Treatment with corticosteroids and splenectomy remains highly successful in most cases. Also immunosuppressants and alkaloid coated platelets, plasma exchange transfusion and high dose immunoglobulin are used for therapy.<sup>[3]</sup>

## CASE REPORT

A 45 year old male patient presented to general medicine department with complaints of body ache, red rashes on abdomen since 2 days.past medical history includes heart burn since 6 years, for that he was on T.Esogress(Esomeprazole ) 40mg,once daily. Two years back he had gum bleeding and he was diagnosed with idiopathic thrombocytopenic purpura from a government hospital.For further management and complaints of body ache he came to our hospital. Patient's vitals were checked and found to be normal. On the day of admission BP were 140/90 mm of Hg,no signs and symptoms related to BPvariations.Blood investigation reveals that patient having reduced platelets count (Table 3& figure 1) and elevated ESR as 41mm/hr.HB:13.5 g/dl.

During his admission peripheral blood smear showed, normocytic normochromic blood picture with thrombocytopenia. Approximate count 40,000 cells/cumm.Physician diagnosed him as having idiopathic thrombocytopenic purpura after ruling out all other cause of symptoms and lab investigations. The goal of treatment includesto increaseplatelet count to a safe level. Permitting patient to live normal lives, and to prevent complications. So as the part of management strategy, oral corticosteroid T.Predmet (methyprednisolone) 8mg were started on day of admission. This is the drug of choice for initial treatment of ITP which reduce rate of plateletdestruction.

After monitoring of platelet count the dose was changedto 16 mg on next day.T.Replatt DS (contains papaya leaf extract) was also prescribed from the same day(Table 1)and T.Esomeprazole 40mg once daily for heart burn. During the course of treatment patient had mild to moderate cough and physician prescribed with syp.cufex

(chlorpheniramine +codeine ) 2 tsp,TID and T.pulmotreat (bromohexine +cetirizine + guaphenesin) BD.For pain management he was prescribed with T.Mefthal fort (mefenamic acid + acetaminophen) and T.Nureeto (etoricoxib+ thiocolchicoside .On the fifth day of admission signs and symptoms reduced and platelets countselevated but didn't reached the normal range .physician advises the patient to get discharged .(Table 2)

## DISCUSSION

ITP is characterized by a low platelet count resulting from both increased platelet destruction and insufficient platelet production in the pathophysiology of ITP.There is a development of auto antibodies against platelet glycoprotein.Immunosupression or splenectomy is the conventional treatment to reduce platelet destruction in ITP. Treatment for patients with ITP must consider age,severity of illness,and anticipated natural history.<sup>[4]</sup> In this patient diagnosed with ITP and management using oral corticosteroid therapy and adjuvant therapy by papaya leaf extract.T.methyl prednisolone 8 mg following 16 mg prescribed,mechanism of corticosteroid therapy still obscure,although they shown to impair the clearance of antibody –coated platelets by monoclonal macrophage <sup>[5]</sup>,reduce autoantibody production and improve integrity of leaking capillaries.<sup>[6]</sup>

The platelet counts were increasing as a responds to the treatment ( Table 3& Figure 1). The membrane stabilizing property of T.Replatt DS (contains papaya leaf extract) prevent platelet lysis.<sup>[7]</sup> Papaya leaf extract also provide an antioxidant property and free radical scavenging activity, which helps in the prevention of hemolysis and bleeding . The metaanalysis revealed the beneficial effect of papaya leaf extract in treatment of thrombocytopenia.<sup>[8]</sup> Kala et al study identified five patients with dengue who were given papaya leaf extract ,found that increase in platelet count within 24 hours of treatment <sup>[9]</sup>.The graph 1 itself shows that positive outcome of treatment by increasing the platelets count day by day .

**Table 1: Treatment chart during hospital stay**

SlNo.	Drugs/ Dose/ Frequency	1 <sup>st</sup> Day	2 <sup>nd</sup> Day	3 <sup>rd</sup> Day	4 <sup>th</sup> Day	5 <sup>th</sup> Day
1.	T. Replatt DS 1-1-1	Y	Y	Y	Y	Y
2.	Syp. Cufex 2tsp 1-1-1	Y	Y	Y	Y	Y
3.	T. Esogress 40mg 1-0-1	Y	Y	Y	Y	Y
4.	T. Meftal forte 500mg 1-0-1	Y	Y			
5.	T. Nurecto MR 8mg + 60mg 1-0-0		Y	Y	Y	Y
6.	T. Predmet 8mg 1-0-1	Y				
7.	T. Predmet 16mg 1-0-1		Y	Y	Y	Y
8.	T. Pulmotreat 1-0-1		Y	Y	Y	Y

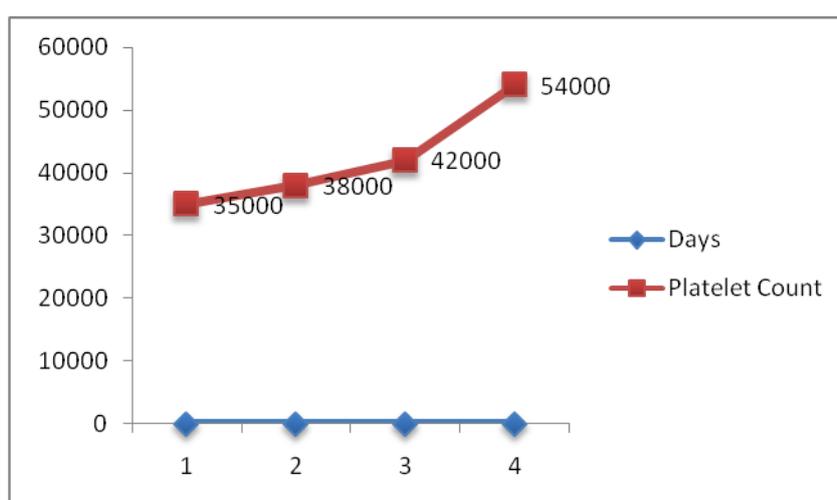
**Table 2: Discharge medications**

Sl No	Drugs	Dose	Frequency
1.	T. Predmet	16 mg	1-0-1
2.	T. Esogress	40 mg	1-0-1
3.	T. Nurecto MR	8mg +60 mg	1-0-0
4.	T. Replatt DS		1-1-1
<b>Review after one week</b>			

**Table 3: Platelet count during the course of treatment**

Day of treatment	Platelet count (1-4.5 lakhs)
First day	35000
Second day	38000
Third day	42000
Fourth day	54000

**Figure 1: Suggestive of patient platelet count**



## CONCLUSION

Thrombocytopenia is a common finding in medical settings, occasionally associated with life threatening complication like bleeding. In this case patient with ITP is treated with oral corticosteroid therapy and papaya leaf extract as adjuvant therapy. Early diagnosis and aggressive management can lead to better outcome. First line therapy for ITP is oral corticosteroids and intravenous immunoglobulin. Patient may experience corticosteroid induced adverse effect so instructed patient about the side effects and disease counselling was also done. Proper monitoring of platelet level and adherence to the therapy can prevent the remission of disease.

**Authors' contributions:** All authors have equally contributed for making this case report to be successful.

**Conflicts of interest:** None

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