

## CLINICAL PROFILE AND TREATMENT OF PATIENTS WITH IMMUNE THROMBOCYTOPENIA IN TERTIARY CARE CENTER

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**ABSTRACT: BACKGROUND:** Idiopathic Thrombocytopenic purpura is relatively uncommon. It is always diagnosis of exclusion. The demographics of Idiopathic Thrombocytopenic purpura can be very varied. Correlation between platelet count and bleeding manifestations and response to therapy have not been clearly established.

**AIM:** The aim of the study was to study the demographics of Idiopathic Thrombocytopenic Purpura in the south Indian population and to analyze the possible relationship between platelet levels, clinical manifestations and response to treatment.

**MATERIALS AND METHODS:** A prospective study was carried out for two years which included all adults with diagnosis of idiopathic thrombocytopenic purpura. Parameters noted were clinical features with emphasis on site of bleeding. Platelet counts on admission were noted. This was monitored regularly till the time of discharge from hospital. Treatment of all patients was with intravenous methyl prednisolone. Some patients also received intravenous immunoglobulin.

**RESULTS:** Sixty patients were included in the study. Patients with average platelet count of more than 60,000 per cubic millimeter did not have bleeding. 63.3 percent of patients presented with bleeding manifestations. The average platelet count in the group was 26,605 per cubic millimeter. Most common bleeding manifestation was bleeding gums followed by cutaneous bleeding. 61.7 percent had complete response to treatment, 17.3 percent had partial response and 30 percent had poor response. 8.5 percent underwent splenectomy. Mortality rate was five percent. These patients had average platelet count of less than 15000 cells per cubic milliliter.

**CONCLUSION:** Identification of common clinical presentation and their relationship to platelet count helps identify patients who are at increased risk for fatal bleeding diathesis.

**KEYWORDS:** Immune Thrombocytopenia, Demographics, Management, Platelet count.

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**INTRODUCTION:** A clinical syndrome of bleeding and purpura consistent with a diagnosis of immune thrombocytopenia (ITP) was described by Werlhof long before platelets were identified as the cellular component of blood playing an essential role in primary haemostasis.<sup>1</sup> In the American Society for Haematology guidelines ITP is defined as 'isolated thrombocytopenia with no clinically apparent associated conditions or other causes of thrombocytopenia.'<sup>2</sup> It is thus a condition that, to a large extent, is a diagnosis of exclusion. Clinical observation and experience indicate a spectrum of manifestations ranging from trivial bruising to catastrophic haemorrhage. The

incidence of fatal haemorrhage is as high as 10.4% according to some studies.<sup>3</sup> The literature suggests that older patients appear to have more severe bleeding manifestations.<sup>4</sup> It has been reported that 43% of patients achieve a remission with a platelet count of > 100 X 10<sup>9</sup>/l, thus implying that the majority of patients have a continuous or relapsing chronic disease state. The aim of this study was to 1Analyze the clinical manifestations of ITP and correlate this with serum platelet levels 2. To study the outcomes of different forms of treatment.

**MATERIALS AND METHODS:** The study was done on a prospective basis in a tertiary care teaching hospital. An institutional ethics committee approval was obtained prior to the study. All patients aged above 18 years with a diagnosis of ITP were included in the study. For purposes of this study, ITP was defined as a platelet count of less than 100,000 platelets per cubic millimeter of blood who did not have any other cause of decrease in platelet count. Detailed history was recorded in all patients. This specifically included history of hematemesis, melena,

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bleeding from the nose or intraoral bleed. History of menorrhagia was recorded in women. If the patient complained of high colored urine, the urine was collected and visually examined for blood stain. This was followed by microscopic examination for red blood cells. All patients underwent a complete clinical examination which included documentation of areas of bleeding and examination of other systems to rule out underlying problems. Examination of the abdomen was done to identify splenomegaly. The oral cavity was examined to see presence of bleeding gums. In patients presenting with neurological deficits, a CT scan was done to rule out intracranial bleed. A complete haemogram, liver function tests, renal function tests and platelet count were done on all patients. A bone marrow biopsy was done in all patients. Patients who were symptomatic were treated with Oral or intravenous steroids, Azathioprine, intravenous immunoglobulin either alone or in combination. This was defined as first line of treatment. The decision to administer single or combination medication was made on an case-to-case basis. Patients who did not respond to therapy were given the next alternative drug. This was defined as second line of treatment. Patients who did not respond to medical treatment at all were suggested to undergo Splenectomy. All the above mentioned data were collected by a trainee in General medicine. Analysis of the collected data was done to see the demographics of patients who had ITP, to correlate the clinical presentation and platelet levels and to assess the response to treatment.

**RESULTS:** Sixty patients were included in the study. The minimum follow-up was six months and the maximum follow-up was for 17 months. 22 were Men(36.7%) and 38(63.3%) were Women. The youngest patient was 18 years old and the oldest was 86 years. 22(36.7%) patients had no bleeding manifestations and 38(63.3%) had bleeding manifestations. Splenomegaly was seen in eight patients(13.3%). Commonest bleeding manifestation was bleeding gums(13.3%). Hematuria, intracranial bleed and oral bleeding was seen only in single patients. Two or more bleeding sites were present in 7(11.6%). Methyl prednisolone alone was given in 52 patients(86.6 percent) as first line of treatment. 37(61.7) patients showed complete response. 11 patients(18.33 percent) showed incomplete response. 12(20 percent) patients had no response. 21 patients(35 percent) received second line treatment. Of this 12 (57.1 percent) showed complete response, 7(33.3 percent) showed partial response and two patients (9.6 percent) showed no response. Three patients(Five percent) died during the course of treatment.

**DISCUSSION:** Idiopathic thrombocytopenic purpura is a relatively uncommon problem. The demographics, clinical presentation and the response to treatment can be very varied. Neylon et al<sup>5</sup> studied 245 patients with ITP. The mean age in their study was 56 years. The mean age in our study was 42 years (range 18 years – 86 years). Most

studies have shown a female preponderance for ITP. Godeau et al<sup>6</sup> showed a male: female ratio of 1:1.9 in a cohort of 122 patients. Johanna et al<sup>7</sup> showed a male:female ratio of 1:1.7 in a study which had 152 patients. Our study had a male:female ratio of 1:1.7. There was no bleeding in 22 patients(36.7 percent). The commonest bleeding presentation was bleeding gums in 8 patients(13.3 percent) followed by cutaneous bleeding in seven patients(11.7 percent). In a study by Farid et al<sup>8</sup> the commonest bleeding manifestation was bruising, epistaxis followed by bleeding gums. There were no patients without bleeding symptoms and isolated finding of low platelet count. There was no clinical correlation between platelet count and bleeding episodes. Most patients in our study had a platelet count between 10000 and 30000. Out of the 32 patients in this group, 28 had bleeding manifestations and four were asymptomatic. The need for bone marrow biopsy to diagnose ITP is controversial. Cines et al<sup>9</sup> recommend that routine bone marrow biopsy is indicated only in patients above 60 years of age and in whom there has been no robust response to treatment. In our study all patients underwent bone marrow biopsy to rule out underlying hematological disorders. However the necessity for bone marrow biopsy cannot be concluded from our study. Majority of patients had glucocorticoids as first line of treatment. Corticosteroids, typically prednisone, are the backbone of the initial treatment. When the dose of corticosteroids is reduced or when the treatment is stopped, remission is sustained in only 10 to 30 percent<sup>10</sup>. Methyl prednisolone alone was given in 52 patients(86.6 percent) as first line of treatment. 37(61.7) patients showed complete response. 11 patients(18.33 percent) showed incomplete response. The standard of practice for corticosteroids non-responders and platelet counts below 30,000/UL after 4 - 6 weeks of therapy is splenectomy<sup>11</sup>. Although five patients in our study had splenomegaly none of them were subjected to splenectomy but were subjected to second line of drugs. We conclude that most common clinical manifestation of ITP was bleeding gums and cutaneous bleeding. Patients with platelet count of less than 30000 had bleeding symptoms. Most patients responded well to first and second line therapy.

**CONCLUSION:** Identification of common clinical presentation and their relationship to platelet count helps identify patients who are at increased risk for fatal bleeding diathesis.

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