ORIGINAL ARTICLE

# CLINICAL PRESENTATIONS IN IMMUNE THROMBOCYTOPENIC PURPURA

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**Background**: Thrombocytopenia is an important cause of mucocutanaeous bleeding in adult and paediatric patients. Immune thrombocytopenia is one of the common causes of thrombocytopenia. Its clinical presentations vary from patient to patient, not studied in our area previously. The present study was planned to see the frequency of clinical presentations of Immune Thrombocytopenic Purpura (ITP) in our patients. **Methods:** This prospective study was conducted on 125 patients with ITP, diagnosed by exclusion of secondary causes of thrombocytopenia. Bone marrow examination was performed on all the patients. **Results:** Bruising, epistaxis and gum bleeding were the commonest clinical presentations in adults and children. Bleeding was more severe in acute cases. Increased menstrual bleeding was seen in female patients. **Conclusion:** Bruising, epistaxis and gum bleeding are the commonest clinical presentations of ITP. Our results are not much different from those of the other studies conducted in Pakistan.

**Keywords:** Thrombocytopenia, Immune thrombocytopenic purpura, mucocutanaeous bleeding

## INTRODUCTION

Immune Thrombocytopenic Purpura is an autoimmune disorder characterized by accelerated platelet destruction and suboptimal platelet production that leads to reduced peripheral blood platelet counts.[1] Its exact aetiology is not known. Nomenclature of ITP is also controversial.[2,3] Paul Gottleib Werholf who first described this syndrome in the 1700s named it 'morbus haemorrhagicus maculosus' and later as Werholf's syndrome. Clinical picture of ITP varies from patient to patient. Some patients present with major bleeds requiring immediate attention while others present with mild mucocutanaeous or subcutaneous haemorrhages.[4] Severity of bleeding depends upon platelets count. The incidence of acute ITP is between 1.9 and 6.4 per $10^5$ children/year and 3.3 per $10^5$ adults/year.[5]

The present study was planned to see the frequency of clinical presentations of ITP in recently diagnosed patients of all age groups.

## MATERIAL AND METHODS

This prospective cross-sectional study was conducted on 125 patients diagnosed with ITP over a period of four years at the Department of Pathology, Ayub Medical College, Abbottabad. The patients were referred from Ayub Teaching Hospital, Department of Dentistry, Private practitioners, and public and private hospitals in Hazara Division for bone-marrow examination, after excluding secondary causes of thrombocytopenia.

Those who presented directly to Ayub Medical College, were screened for Hepatitis B, C, HIV and other viral ailments, *H. Pylori*, malaria and systemic lupus erythematosus at the Department of Pathology, Ayub Medical College. Bone-marrow examination of all patients was also done.

Patients with clinical or laboratory evidence of any secondary cause of thrombocytopenia or bone-marrow pathology like aplastic anaemia, leukaemia etc. were excluded from the study.

## RESULTS

Bruising, epistaxis and gum bleeding were the three common (88%) presenting features. Females out numbered the males (56 vs. 44%) (Table-1). Haemetemesis and haematuria were seen less frequently (8%). Menorrhagia was seen in 3.2% female patients (Table-1).

Acute ITP was more common (25.6%) in patients under 15 years of age. Chronic ITP was more common (61.6%) in adults (Table-2).

Bleeding episodes were more frequent with platelet count less than $10\times10^3/\mu l$ (Table-3).

**Table-1: Frequency of clinical presentations in ITP (n=125)**

| | Male | | Female | | Total | |
|---|---|---|---|---|---|---|
| **Clinical presentation** | **No.** | **%** | **No.** | **%** | **No.** | **%** |
| **Bruising** | 28 | 22.4 | 35 | 28 | 63 | 50.4 |
| **Epistaxis** | 16 | 12.8 | 20 | 16 | 36 | 28.8 |
| **Bleeding gum** | 5 | 4 | 6 | 4.8 | 11 | 8.8 |
| **Haematemesis** | 4 | 3.2 | 2 | 1.6 | 6 | 4.8 |
| **Haematuria** | 2 | 1.6 | 3 | 2.4 | 5 | 4 |
| **Menorrhagia** | --- | --- | 4 | 3.2 | 4 | 3.2 |
| **Total** | **55** | **44** | **70** | **56** | **125** | **100** |

**Table -2: Frequency of acute and chronic ITP in different age groups (n=125)**

| | Acute ITP | | Chronic ITP | | Total | |
|---|---|---|---|---|---|---|
| **Age (years)** | **No.** | **%** | **No.** | **%** | **No.** | **%** |
| **<15** | 32 | 25.6 | 5 | 4 | 37 | 30.4 |
| **16–30** | 8 | 6.4 | 18 | 14.4 | 26 | 20.8 |
| **31–50** | 2 | 1.6 | 57 | 45.6 | 59 | 47.2 |
| **>50** | 1 | 0.8 | 2 | 1.6 | 3 | 2.4 |
| **Total** | **43** | **34.4** | **82** | **65.6** | **125** | **100** |

**Table-3: Platelet count and frequency of bleeding episodes (n=131 episodes)**

| Bleeding episode | Platelet Count×$10^3$/µl | | | | Total | |
|---|---|---|---|---|---|---|
| | <10 | 10–19 | 20–49 | 50–100 | No. | % |
| Bruising | 43 | 17 | 8 | 1 | 69 | 52.7 |
| Epistaxis | 24 | 7 | 5 | 1 | 37 | 28.3 |
| Bleeding gum | 9 | 2 | – | – | 11 | 8.3 |
| Haematemesis | 5 | 1 | – | – | 6 | 4.6 |
| Haematuria | 2 | 1 | 1 | – | 4 | 3 |
| Menorrhagia | 3 | 1 | – | – | 4 | 3 |
| Total | 86 | 29 | 14 | 2 | 131 | 100 |

## DISCUSSION

Immune thrombocytopenic purpura is a common paediatric haematologic disorder. Bone-marrow aspiration (BMA) is often performed in children with acute ITP to rule out leukaemia, aplastic anaemia or other haematologic diseases. However the role of BMA in children with typical clinical and haematological features of acute ITP has been questioned. A study was performed to determine whether BMA is indicated in acute childhood ITP, at Hevi Paediatric Teaching Hospital in Duhok, North of Iraq. That study concluded that routine bone-marrow examination is not needed for children with typical features of acute ITP.[6] A similar study conducted on need of doing bone-marrow for the diagnosis of ITP concluded that bone-marrow examination should not be a part of routine work-up for diagnosing ITP in children and should be reserved for those having atypical clinical and laboratory features.[7] Another study conducted on clinico-haematological features of ITP in adults concluded that adult ITP is predominantly seen in young females and may be associated with autoimmune disorders at the time of diagnosis.[8] In our study ITP was seen more commonly in females, which is in accordance with the findings of this study. Furthermore, acute ITP was common in children and adolescents while chronic ITP was seen mostly in adults. Correlation with autoimmune diseases was beyond the scope of the present study.

Aetiology and clinical features of patients presenting with bleeding due to thrombocytopenia was the objective of another study conducted on adult patients. That study concluded that malaria and viral infections were common causes of transient thrombocytopenia. Epistaxis and gum bleeding were the leading clinical manifestations in adult population.[9] In a study conducted on children petechiae and bruises were the commonest clinical findings of ITP. Platelet counts above $20\times10^3$/µl usually do not require any special treatment if asymptomatic.[10]

Bruising was the commonest presenting feature in the present study followed by epistaxis, while earlier researchers have noted that epistaxis was the most common presenting feature followed by bruising. In the present study it was noted that patients with severe thrombocytopenia (platelet counts $<10\times10^3$/µl) bled more. This was not mentioned in the above cited studies[9,10].

## CONCLUSION

Bruising, epistaxis and bleeding gums were the commonest clinical presentations in our patients. Our results are not much different from those of the other studies conducted in Pakistan.

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