FREQUENCY OF CLINICAL FEATURES OF IDIOPATHIC THROMBOCYTOPENIC PURPURA

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ABSTRACT

Objectives: To find the frequency of common clinical features of Idiopathic Thrombocytopenic Purpura (ITP) in children presenting to Department of Child Health, Khyber Teaching Hospital, Peshawar.

Material and Methods: A cross sectional descriptive study design was used and 50 children presenting with bleeding through any orifice with diagnostic evidence of ITP were selected through non random convenient sampling. Common clinical features were noted along with hematological parameters. The cases were then managed according to standardized management criteria.

Results: Bruising (46%), Epistaxis (36%) and Petechiae (25%) were the most common clinical features. Platelet count was reduced in 38 out of 50 cases with median count of 135000/mm³.

Conclusion: Bruising, Epistaxis and Petechiae are the most common features of ITP.

Key Words: ITP, Transfusion, Epistaxis, Bruising, Platelets count.

INTRODUCTION

Idiopathic thrombocytopenic purpura (ITP) is also known as immune thrombocytopenic purpura and is the commonest cause of thrombocytopenia in childhood. It results from an immune mediated destruction of circulating platelets within the reticuloendothelial system, mainly in the spleen. The reduced platelet count is accompanied by a compensatory increase in megakaryocytes within the bone marrow. ITP is a cause of concern to parents because all of a sudden a child develops bruises/epistaxis without any warning. It mainly affects children between 2 and 10 years of age, who develop purpura and superficial bruising and may have epistaxis and other mucosal bleeding.

In about 90% of the children, the disease is acute and self-limiting. Most will require only a brief stay in hospital to confirm the diagnosis and assess its severity. There has been much debate about the need to perform a bone marrow aspiration to exclude malignant infiltration or aplasia. If the clinical features are characteristic, with no abnormality in the blood other than a low platelet count and there is no intention to treat, there is no need to examine the bone marrow.

Treatment depends upon the condition of the child at presentation. If the child has minor purpura and platelet counts are greater than 30,000/mm³ the child should be treated conservatively. Children with platelet counts <20,000/mm³ and significant mucous membrane bleeding have to be treated with specific regimens of glucocorticoids or intravenous immunoglobulins (IVIg). Children who have life-threatening bleeding should be hospitalized. They should receive conventional critical care measures along with treatment of ITP. Appropriate regimens include high dose parenteral glucocorticoid therapy, platelet transfusions and IVIg. The objective of this study was to find out the frequency of various clinical findings in children with ITP.

MATERIALS AND METHODS

This study was conducted at the Department of Pediatrics, Khyber Teaching Hospital, Peshawar from February 2009 to October 2010. A total of 50 patients diagnosed with Idiopathic Thrombocytopenia Purpura were selected through non random convenient consecutive sampling method. Inclusion criteria were children aged less than 15 years presenting with bleeding from any orifice, petechial hemorrhages on skin and platelet count lesser than 150,000/mm³ in absence of derangement of coagulation profile.

All enrolled cases underwent recording of all their clinical and laboratory profile. Data related to pertinent clinical features, laboratory parameters, blood transfusion requirement and hospital stay was recorded in SPSS 15. Categorical variables like gender, transfusion status and clinical features were presented in frequencies and percentages whereas numeric variables like age, weight, hospital stay,
platelets count, Hb and TLC were presented as Mean ± SD.

RESULTS

Out of 50 patients, there were 35(70%) male and 15(30%) female. Sixty-four percent (32) children were transfused with either blood or platelets. Thirty-six percent (18) did not require any form of transfusion. Age, weight and duration of hospital stay is shown Table 1. Table No. 2 shows hemoglobin level, total leucocyte and platelet counts. Main clinical features were bruising tendency, epistaxis and petechiae followed by anemia, haematuria, fever and haematemesis (Table 3).

<table>
<thead>
<tr>
<th>Clinical Features</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No clinical features</td>
<td>5</td>
<td>4</td>
<td>9(18%)</td>
</tr>
<tr>
<td>Bruising Tendency</td>
<td>12</td>
<td>11</td>
<td>23(46%)</td>
</tr>
<tr>
<td>Epistaxis</td>
<td>8</td>
<td>10</td>
<td>18(36%)</td>
</tr>
<tr>
<td>Petechiae</td>
<td>7</td>
<td>7</td>
<td>14(28%)</td>
</tr>
<tr>
<td>Anemia</td>
<td>4</td>
<td>1</td>
<td>5(10%)</td>
</tr>
<tr>
<td>Hematuria</td>
<td>2</td>
<td>2</td>
<td>4(8%)</td>
</tr>
<tr>
<td>Fever</td>
<td>3</td>
<td>1</td>
<td>4(8%)</td>
</tr>
<tr>
<td>Haematemesis</td>
<td>1</td>
<td>2</td>
<td>3(6%)</td>
</tr>
</tbody>
</table>

DISCUSSION

ITP is the commonest cause of thrombocytopenia. Although there is no reliable epidemiological data on the incidence of ITP, estimates are that 10-25/100,000 children and adults develop ITP each year. ITP affects more male than female children. This fact is obvious in our study as the males out number females in a ratio of 2.6:1.

This disease is known to affect children in the younger age group. This fact is clearly highlighted in our study where children less than 4 years constitute 50% of the cases while the age range of patients was between 05 months to 15 years. The commonest clinical presentation in our study was bruising tendencies and epistaxis (23 and 18 cases respectively) and petechiae constituting a total of 14 cases. Other major findings were anemia and hematuria.

A study conducted in Peshawar in 1995 reported petechiae and ecchymosis as the initial presentation in 100% cases. Epistaxis, gum bleeding and bleeding per rectum were reported in eleven case (34%), 3 cases (9%) and 2 cases (6%) respectively. There was no case documented with intracranial bleed. For anaemia our cut off point was an Hb% of 9gm%. This was microcytic hypochromic anaemia which was also reported by Frank F et al. A total of 9 patients presented with haemoglobin of less than 9 gms%. Platelet count was < 150,000/mm³ in all the cases and that is why bleeding time (BT) was prolonged in all these cases. Clotting time (CT) and coagulation profile was normal in all the cases. Bone marrow was performed in 3 cases and results of all three were consistent with a diagnosis of ITP.

Four patients had platelet counts <20,000/mm³ and all of them were treated with oral steroids for a period of four weeks after which all of them responded to treatment and the platelet counts returned to normal. The same response to treatment with steroids was shown by Arman V et al. Immunoglobulins and Anti-Rh (D) were not given to any patient as these modalities of treatment are quite expensive and beyond the buying capacity of our patients.

In a study done by American society of hematology about 75% of patients were not treated initially. Most patients had platelet counts <50,000/mm³ at presentation. Similarly in another study most had platelet counts <20,000/mm³ of the 221 untreated children, 2 (0.9%) had fatal bleeding associated with the acute presentation, and 191 (87%) had a complete remission from ITP. The platelet count normalized in 2 to 8 weeks, with one half to two thirds of the patients recovering within 4 weeks.

Table 1: Age, weight and Hospital stay

<table>
<thead>
<tr>
<th>Age (months)</th>
<th>n</th>
<th>Min-Max value</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>5.5-100</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>50</td>
<td>6.3-39.2</td>
<td>14.4</td>
</tr>
<tr>
<td>Hospital Stay Duration (days)</td>
<td>50</td>
<td>1-25</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 2: Investigations

<table>
<thead>
<tr>
<th>Platelets Count (per mm³)</th>
<th>n</th>
<th>Min-Max value</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>1000-97000/mm³</td>
<td>135000</td>
<td></td>
</tr>
<tr>
<td>Hb (g/dl)</td>
<td>50</td>
<td>5-15 g/dl</td>
<td>11.4</td>
</tr>
<tr>
<td>TLC (per mm³)</td>
<td>50</td>
<td>3300-21300/mm³</td>
<td>9050</td>
</tr>
</tbody>
</table>

Table 3: Clinical features of ITP
CONCLUSION

Petechiae and bruises are the commonest clinical findings of ITP. Platelet counts above 20,000/mm$^3$ usually do not require any special treatment if asymptomatic. Bone marrow examination for diagnosis is not required in straightforward cases of ITP.

REFERENCES


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