Immune Thrombocytopenic Purpura in Children of Eastern Henan Province, China

In this retrospective cohort study conducted in 63 children with idiopathic thrombocytopenic purpura (ITP) in China; petechiae, bruises and bleeding were the major presentations. Most cases required therapy with one/more treatment options.

**Keywords:** Clinical profile, Thrombocytopenia, Treatment

Immune thrombocytopenic purpura (ITP) is an acquired autoimmune hematologic condition characterized by destruction of platelets leading to isolated thrombocytopenia [1,2]. It is customarily a self-limiting ailment in otherwise healthy children presenting with bruising, purpura, petechiae, mucosal bleeding, and thrombocytopenia, plasma anti-platelet antibodies, and rise in megakaryocytes [3-5].

This retrospective study was performed in the pediatric ward and outpatient clinic of a tertiary hospital in eastern Henan province, China over a period of five years (August 2009 to September 2014) to describe clinical features in children with ITP. The study target population included children below 18 years’ age diagnosed with ITP as per International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10) 2010 D69.3] and treated at the hospital. A questionnaire was used for collection of clinical and demographic data of the children based on medical (hospital/clinic) records. Information on prescription drugs to patients and treatment outcome were collected. The diagnosis was based on clinical history as well as physical examination– along with tests revealing isolated thrombocytopenia (platelet count <100×10^9/L), normal peripheral blood smear, white blood cells, and no underlying malignancies and conditions. Details on bone marrow examination if carried out were also collected. Chronic ITP was defined as persistent thrombocytopenia, lasting greater than six months after the initial diagnosis. The study got the approval from the institutional Ethics Committee.

Of the 63 children studied, 73% were diagnosed with acute ITP and 27% with chronic ITP. Acute ITP and chronic ITP were more prevalent in boys (52.2% and 58.8%, respectively) compared to girls (47.8% and 41.2%, respectively), though insignificant. Nearly 20.6% of children had family history of ITP (Table I). Bone marrow aspiration was performed in 36 (57.1%) cases to exclude other pathology; all of which confirmed the diagnosis. No significant seasonal difference was noted. History of preceding viral infection was frequent in relation to both acute and chronic ITP (73.9% and 64.7%). The most widely used treatment for children was intravenous immunoglobulin (IVIG) (61.9%) followed by
The treatment of ITP in different parts of the world varies with respect to criteria for initiation of treatment, which treatment modality to be used, and whether or not hospitalization is required [6]. Limitations of present study included information bias as well as selection bias, and restricted number of patients. We were unable to evaluate all variables and were restricted by the incompleteness of proper documentation.

Although ITP is self-limiting in most of the cases, it tends to be troublesome diagnosis for physicians and parents. Petechiae, bruises and bleeding were the most common presentations in children with ITP in present study. Most of cases of ITP needed treatment with one/more of the available options. The overall prognosis was found to be good.

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REFERENCES

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<tr>
<th>Characteristics</th>
<th>ITP</th>
<th>P value</th>
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<tr>
<td><strong>Age, yrs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>4.2 (3.7)</td>
<td>4.3 (3.8)</td>
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<tr>
<td>Median (Range)</td>
<td>3 (0.4-16.2)</td>
<td>3 (0.4-16.2)</td>
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<tr>
<td><strong>Gender</strong></td>
<td></td>
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<tr>
<td>Male, n (%)</td>
<td>34 (53.9)</td>
<td>24 (52.2)</td>
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<tr>
<td><strong>Family history of ITP</strong></td>
<td>13 (20.6)</td>
<td>9 (19.6)</td>
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<tr>
<td><strong>Abrupt onset (&lt;1 week), n (%)</strong></td>
<td>47 (74.6)</td>
<td>38 (82.6)</td>
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<tr>
<td><strong>Clinical signs, n (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petechiae</td>
<td>54 (85.7)</td>
<td>39 (84.8)</td>
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<tr>
<td>Bruising</td>
<td>46 (73.0)</td>
<td>35 (76.1)</td>
</tr>
<tr>
<td>Bleeding</td>
<td>23 (36.5)</td>
<td>16 (34.8)</td>
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<tr>
<td>Epistaxis</td>
<td>15 (23.8)</td>
<td>11 (23.9)</td>
</tr>
<tr>
<td>Lymphadenopathy</td>
<td>7 (11.1)</td>
<td>7 (15.2)</td>
</tr>
<tr>
<td>Gastrointestinal bleed</td>
<td>4 (6.4)</td>
<td>3 (6.5)</td>
</tr>
<tr>
<td>Splenomegaly</td>
<td>3 (4.8)</td>
<td>1 (2.2)</td>
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<tr>
<td>Hepatomegaly</td>
<td>3 (4.8)</td>
<td>1 (2.2)</td>
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<tr>
<td><strong>Treatment, n (%)</strong></td>
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<tr>
<td>IVIG</td>
<td>39 (61.9)</td>
<td>29 (63.0)</td>
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<td>10 (15.9)</td>
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<td>Anti-Rh(D) immunoglobulin</td>
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<td>1 (1.6)</td>
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<tr>
<td>Splenectomy</td>
<td>1 (1.6)</td>
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<tr>
<td>Only observation</td>
<td>6 (9.5)</td>
<td>6 (13.0)</td>
</tr>
</tbody>
</table>

**TABLE I** Sociodemographic characteristics, clinical and pathological features of children with ITP (N=63)

ITP = Immune thrombocytopenia purpura; IVIG = Intravenous immunoglobulin.