Original Research Article

Evaluation of clinical profile of febrile thrombocytopenia: an institutional based study

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ABSTRACT

Background: Most instances of prolonged fevers are examples of surely understood ailments showing them atypically. Thrombocytopenia is characterized as platelet tally less than 1,50,000/μL. This is because of diminished creation, expanded obliteration, and expanded sequestration in spleen. Hence, we planned the present study to analyse the clinical profile of febrile thrombocytopenia.

Methods: The present study included assessment of clinical profile of febrile thrombocytopenia. A total of 200 subjects were included in the present study. At the time of diagnosis, complete detailed history of all the patients was taken along with thorough clinical examination. Etiologic and clinical data of all the patients was recorded and compiled. All the results will be analysed by SPSS software 16.0.

Results: Out of total 200 cases included in the present study, fifty-two cases were due to viral fever while fifty-seven cases were due to malaria. Jaundice and cough was present in 52 and 58 cases respectively. In fifty five percent of the cases, platelet count was between 50000 to 10000 per cubic mm.

Conclusions: Infectious diseases accounts for most of the cases of febrile thrombocytopenia.

Keywords: Febrile, Fever, Thrombocytopenia

INTRODUCTION

Fever is an inescapable and pervasive topic in human myth, workmanship and science. Fever is such a typical sign of disease that it is not astonishing to discover precise depictions of the febrile patients in early-written history. Most instances of delayed fevers are examples of surely understood ailments showing them atypically.1-3 The real example of realistic recording of fever is variable that it is not useful in indicating particular analysis constantly a forceful symptomatic exertion is generally legitimized in light of the fact that remedial or palliative measures would so be able to frequently bring into utilization once the finding has been accomplished. Fever is characterized as a rise of the body temperature over the ordinary circadian range as the consequence of an adjustment in the thermoregulatory focus situated in the front hypothalamus. Despite the fact that thrombocytopenia is experienced in different illnesses, it is for certain that possibly lethal seeping because of thrombocytopenia is rare.4-6 Thrombocytopenia is characterized as platelet tally less than 1,50,000/μL. This is because of diminished creation, expanded obliteration, and expanded sequestration in spleen.7 Hence, we planned the present study to analyse the clinical profile of febrile thrombocytopenia.

METHODS

The present study was conducted in the department of haematology and general medicine of the medical institute and included assessment of clinical profile of
The diagnosis of febrile thrombocytopenia. A total of 200 subjects were included in the present study. Ethical approval was taken from institutional ethical committee and written consent was obtained from all the patients after explaining in detail the entire research protocol.

**Inclusion criteria**
- All the patients more than 12 years of age.
- All the patients presenting with the complaints of fever (>99.9 degree F) with thrombocytopenia (less than 1,50,000/μL).

**Exclusion criteria**
- Patients less than 12 years of age,
- Patients having afebrile thrombocytopenia,
- Congenital thrombocytopenia.

At the time of diagnosis, complete detailed history of all the patients was taken along with thorough clinical examination. Recording of all the laboratory and technical investigation reports of all the subjects was done. After confirmation of the diagnosis, treatment of the patients was done specifically and symptomatically. In subjects with bleeding complications, platelet transfusions were done if platelet count was <20,000/μL. Etiologic and clinical data of all the patients was recorded and compiled. All the results will be analysed by SPSS software 16.0. Chi-square test and student t test will be used for the assessment of level of significance.

**RESULTS**

**Table 1: Etiologic profile of febrile thrombocytopenia.**

<table>
<thead>
<tr>
<th>Aetiology</th>
<th>Number (200)</th>
<th>% (100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viral fever</td>
<td>52</td>
<td>26</td>
</tr>
<tr>
<td>Malaria</td>
<td>57</td>
<td>28.5</td>
</tr>
<tr>
<td>Dengue fever</td>
<td>54</td>
<td>27</td>
</tr>
<tr>
<td>Septicaemia</td>
<td>25</td>
<td>12.5</td>
</tr>
<tr>
<td>Leptospirosis</td>
<td>7</td>
<td>3.5</td>
</tr>
<tr>
<td>Scrub typhus</td>
<td>5</td>
<td>2.5</td>
</tr>
</tbody>
</table>

**Table 2: Clinical presentation of febrile thrombocytopenia cases.**

<table>
<thead>
<tr>
<th>Clinical parameter</th>
<th>Number of case (200)</th>
<th>% (100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td>Chills and rigors</td>
<td>110</td>
<td>55</td>
</tr>
<tr>
<td>Jaundice</td>
<td>52</td>
<td>26</td>
</tr>
<tr>
<td>Cough</td>
<td>58</td>
<td>29</td>
</tr>
<tr>
<td>Pallor</td>
<td>102</td>
<td>51</td>
</tr>
<tr>
<td>Headache</td>
<td>112</td>
<td>56</td>
</tr>
<tr>
<td>Breathlessness</td>
<td>49</td>
<td>24.5</td>
</tr>
<tr>
<td>Myalgia</td>
<td>125</td>
<td>62.5</td>
</tr>
<tr>
<td>Bleeding</td>
<td>61</td>
<td>30.5</td>
</tr>
<tr>
<td>Rashes</td>
<td>26</td>
<td>13</td>
</tr>
</tbody>
</table>

Out of total 200 cases included in the present study, fifty-two cases were due to viral fever while fifty-seven cases were due to malaria (Table 1).

In 54 cases, Dengue fever was responsible for febrile thrombocytopenia (Figure 1).

**Figure 1: Etiologic and clinical profile of cases of the present study.**

Chills and rigors are seen in 110 cases of febrile thrombocytopenia. Jaundice and cough was present in 52 and 58 cases respectively (Table 2). Myalgia was seen in 62.5 percent of the cases while bleeding was observed in sixty-one cases respectively. In fifty five percent of the cases, platelet count was between 50000 to 10000 per cubic mm (Table 3).

**Table 3: Severity of thrombocytopenia cases.**

<table>
<thead>
<tr>
<th>Platelet count</th>
<th>Number of cases</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 20000 per cubic mm</td>
<td>25</td>
<td>12.5</td>
</tr>
<tr>
<td>20000 to 50000 per cubic mm</td>
<td>55</td>
<td>27.5</td>
</tr>
<tr>
<td>50000 to 100000 per cubic mm</td>
<td>110</td>
<td>55</td>
</tr>
<tr>
<td>100000 to 1500000 per cubic mm</td>
<td>10</td>
<td>5</td>
</tr>
</tbody>
</table>

**DISCUSSION**

Fall in the levels of platelets in the circulatory blood below 1.5 lacs per cubic mm is categorized as thrombocytopenia. These cases are often asymptomatic and are discovered under routine haematological investigations.\(^5\) Hence, we planned the present study to analyse the clinical profile of febrile thrombocytopenia.

In the present study, we observed that malaria was the most common cause of febrile thrombocytopenia (Table 1). Gondhali MP et al evaluated 100 subjects of ages more than 12 years with fever and thrombocytopenia. The most common cause of thrombocytopenia was infection, with Dengue being the most common infectious agent observed. Fifteen percent of subjects showed bleeding as a clinical sign. 14% of patients had
Chikungunya, no etiology was found in 20.94% cases. On statistical analysis there was a significant association of thrombocytopenia with Dengue and Malaria cases. No significant association was found with Widal and Chikungunya cases. Finding of thrombocytopenia in patients with acute febrile illness raises the suspicion of Dengue and malaria infection.12-16

CONCLUSION

From the above results, the authors conclude that infectious diseases accounts for most of the cases of febrile thrombocytopenia. Also, falling of platelet count below 20000 per cubic mm increases the risk of bleeding manifestation.

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Conflict of interest: None declared
Ethical approval: The study was approved by the institutional ethics committee

REFERENCES


