CLINICAL PROFILE EVALUATION OF FEBRILE THROMBOCYTOPENIA

Dr. Mridul Bhushan[1], Dr.Prem Singh [2*]

1. Professor Department of Medicine, Rama Medical College Hospital and Research Centre Mandhana Kanpur., 2. Head and Associate Professor, Department of Medicine, Ganesh Shankar Vidyarthi Memorial Medical College, Kanpur.

*Corresponding author- Dr. Prem Singh
Email id - drpremsingh22gsvm@gmail.com

ABSTRACT

Background: Thrombocytopenia is multifactorial and can be present in many diseases but still it can be fatal. The platelet count less than 1,50,000/µL characterized as thrombocytopenia. The most common etiology behind this in febrile cases are expanded sequestration in the spleen, diminished creation, and expanded obliteration**. Material & Methods:** In present study 100 patients of more than 12 years of age having a fever as presenting symptom with thrombocytopenia were included in the study after obtaining approval from the institutional ethics committee. Patients having a febrile thrombocytopenia and congenital thrombocytopenia was excluded from the study. **Results:** 26% cases were due to viral fever while 29% cases were due to malaria, 27% cases had dengue fever and 12% cases had septicemia while leptospirosis and scrub typhus accounts for 6% cases collectively. In sixty percent of the cases, platelet count was between 50000 to 100000 per cubic mm. Headache was present in 72% cases, Myalgia was seen in 65 percent of the cases, Chills and rigors are seen in 60% cases of febrile thrombocytopenia. Bleeding and rashes were present in 13% and 21% cases respectively. **Conclusion:** We concluded Based on the results of a present study that, infectious diseases account for most of the cases of febrile thrombocytopenia and out of them malaria and dengue were the most common cause

Keywords : Febrile, Fever, Thrombocytopenia.

INTRODUCTION

Pyrexia is an inevitable and pandemic concern since ancient times, craftsmanship and science. Pyrexia is a classical representative sign of disease that it is not extremely surprising to discover unambiguous illustration of the febrile cases in ancient history. The most common occurrence of delayed fever cases are instances of firmly understood sickness presenting them atypically **(1)**. The correct reporting and recording of fever cases are variable hence it is

not so valuable doing the exact investigations and analysis every time for symptomatic evaluation. Therefore it is done for the promotive and preventive approach in the early stages so the main outcome can be hampered **(2)**. After the investigation reports reveal the cause and pathology a proper plan for the treatment can be implemented. The thermoregulatory centers are situated in the front part of the hypothalamus and due rise in

temperature over the normal circadian rage the sign and symptoms of pyrexia occur **(3)**. As we know thrombocytopenia a multifactorial sign and can be present in many diseases but still a rare finding and can be fatal **(4)**. The platelet count less than 1,50,000/μL characterized as thrombocytopenia **(5)**. The most common etiology behind this in febrile cases are expanded sequestration in the spleen, diminished creation and expanded obliteration **(6)**. Hence, the present study was conducted to evaluate the clinical profile of febrile thrombocytopenia.

MATERIALS & METHODS

The present study was conducted in our tertiary care hospital, in the department of general medicine, Rama Medical College Hospital and Research Centre Mandhana, Kanpur. 100 patients of more than 12 years of age having fever as presenting symptom with thrombocytopenia were included in the study after obtaining approval from the institutional ethics committee. Patients having afebrile thrombocytopenia and congenital thrombocytopenia were excluded from the study. After obtaining written consent detailed history of illness was recorded along with thorough clinical examination and clinical profile evaluation of febrile thrombocytopenia was done by the help of laboratory diagnosis. The data were analyzed using MS Excel 2010, Epi Info v7 and SPSS v22.

RESULTS

In the present study out of hundred patients, 26% cases were due to viral fever while 29% cases were due to malaria, 27% cases had dengue fever and 12% cases had septicemia while leptospirosis and scrub typhus accounts for 6% cases collectively. (Table 1)

In sixty percent of the cases, platelet count was between 50000 to 100000 per cubic mm, 13% cases had platelet count between100000 to

150000 per cubic mm, 21% cases had platelet count between 20000 to 50000 per cubic mm and 6% cases had platelet count less than 20000 per cubic mm (Table 2).

Headache was present in 72% cases, Myalgia was seen in 65 percent of the cases, Chills and rigors are seen in 60% cases of febrile thrombocytopenia. 58% cases present with pallor, 28% cases present with Jaundice, cough and breathlessness was present in 30% and 22% cases respectively. Bleeding and rashes were present in 13% and 21% cases respectively. (Table 3)

Table No.-1: Etiologic profile of febrile thrombocytopenia

Etiology	No. of Patients	Percentage (%)
Viral fever	26	26
Malaria	29	29
Dengue fever	27	27
Septicemia	12	12
Leptospirosis	3	3
Scrub typhus	3	3
Total	**100**	**100%**

Table No.-2: Severity of thrombocytopenia cases.

Platelet count	No. of Patients	Percentage (%)
Less than 20000 per cubic mm	6	6
20000 to 50000 per cubic mm	21	21
50000 to 100000 per cubic mm	60	60
100000 to 1500000 per cubic mm	13	13
Total	**100**	**100%**

Table No.-3: Clinical presentation of febrile thrombocytopenia cases.

Clinical parameter	No. of Patients	Percentage (%)
Fever	100	100
Chills and rigors	60	60
Jaundice	28	28
A cough	30	30
Pallor	58	58
Headache	72	72
Breathlessness	22	22
Myalgia	65	65
Bleeding	13	13
Rashes	21	21

DISCUSSION

As the above-stated definition, the fall in the levels of a platelet count below 1.5 lakh per cubic mm in the circulatory blood is defined as thrombocytopenia. Most often cases are asymptomatic and are discovered accidentally under routine blood investigations. Hence, we conducted the present study to evaluate the clinical profile of patients with febrile thrombocytopenia.

In the present study, we found that malaria was the most common etiology associated of febrile thrombocytopenia. A study conducted by Gondhali MP et al observed 100 subjects of more than 12 years of age with fever and thrombocytopenia. In contrast to present study, they found the most common cause of febrile thrombocytopenia was Dengue (infection). Only fifteen percent of patients showed clinical sign of bleeding while 14% of cases had a Petechial rash or puerperal rash as the characteristic feature and also the warning sign for spontaneous bleeding in 10%. Great recovery from illness was noted in

94% while 6% had mortality. Septicemia was reported among 5% of deaths and the rest 1% caused by dengue. Disease, mainly dengue was the commonest most common reason for high-grade fever with thrombocytopenia. Maximum number of patients are in the latent stage of still asymptomatic only few had a critical condition (7). Another study conducted by Raikar et al observed the clinical picture associated with febrile thrombocytopenia. They enrolled a total of 100 patients in the study who were suffering from fever and investigations found thrombocytopenia. They found males are more commonly selected than females. Bleeding tendency was observed in four cases only. They didn't find any association between bleeding and platelet count. In infectious cause, Dengue was accounted for the main caseload. They also found malaria was responsible for mild-to-moderate febrile thrombocytopenia caseload with platelets counts lies between 50,000 to 1 lakh per cubic mm in most of the cases. They found only four patients out of hundred patients presented with a bleeding tendency. Among malaria cases, three patients were of mixed Plasmodium vivax with Plasmodium falciparum malaria demonstrated with petechial or puerperal rash and also had hematuria. Among dengue cases one patient presented with bleeding gums. On treatment Platelet count started to rise from 2nd day of admission to 8th day of admission to hospital. They observed out of hundred patients three had febrile thrombocytopenia without any bleeding tendency (8).

In our study, we found fever, headache, myalgia, chills, and rigor were the commonest signs and symptoms (Table 3). A study conducted by Fah et al comparatively observed that the clinical profile of acute febrile subjects presenting with thrombocytopenia and without thrombocytopenia. A study conducted at the primary health care center and they enrolled

consecutive patients having an undiagnosed fever of less than fourteen days. They recorded all the detailed history of the patients along with complete blood count (CBC) examination. They calculated the odds ratio in their case-control study for each major symptom. They enrolled Seventy-three patients in their study. Out of them, 45.2% had febrile thrombocytopenia. Myalgia and headache were also a common findings among all subjects. However, young patients present with thrombocytopenia had nausea and vomiting more often and significantly than in patients with normal platelet count. complete blood count (CBC) examination was done in these acute non-specific febrile patients who had nausea and vomiting because of higher risk of thrombocytopenia and should be managed likewise **(9)**. Another study conducted by Geetha et al evaluate the significance of thrombocytopenia in patients diagnosed with multiple etiologies of acute non-specific febrile illness. They enrolled 130 Patients presenting with acute fever without any diagnosed cause of less than fourteen days. Detailed history and routine investigations were done for routine blood counts, Malaria rapid test, Widal test, Card test for Chikungunya and Dengue card test. Liver function test was performed on selected patients. Among total 130 patients, only 33% of patients showed Thrombocytopenia. Among these cases 41.86% patients had Malaria, 32.55% of patients had dengue, 4.65% had chikungunya and in 20.94% cases, no etiology was found. There was a highly significant association found between thrombocytopenia with Dengue and Malaria. There was no significant association was found of thrombocytopenia with Chikungunya and Widal cases. They conclude finding of febrile thrombocytopenia raises the suspicion of Dengue and malaria **(10)**.

CONCLUSION

We concluded Based on the results of a present study that, infectious diseases account for most of the cases of febrile thrombocytopenia and out of them malaria and dengue were the most common cause. Also, with the fall in the platelet count below 20000 per cubic mm there is increases in the risk of bleeding tendency.

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