



CLINICAL PROFILE OF FEVER WITH THROMBOCYTOPENIA AT A TERTIARY CARE HOSPITAL BASED STUDY

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KEYWORDS :

INTRODUCTION:

Fever has been recognized as a cardinal manifestation of disease since ancient times, as recorded by ancient scholars like Hippocrates. [1] Seen first as a disease but later recognized as an accompaniment to a variety of disease entities, fever is an easily noted and reliable marker of illness. [2] Fever is a pervasive and ubiquitous theme in human myth, art and science. Fever is such a common manifestation of illness that it is not surprising to find accurate descriptions of the febrile patients in early-recorded history. [3] An AM temperature of $>37.2^{\circ}\text{C}$ (98.9°F) or a PM temperature of $>37.7^{\circ}\text{C}$ (99.9°F) would define fever. [4] Platelets play a central role in normal haemostasis and therefore also in thrombosis. Thrombocytopenia is defined as platelet count $<1,50,000/\text{cumm}$. This is due to decreased production, increased destruction (immunogenic and non-immunogenic) and increased sequestration in spleen. Of these infections being the commonest cause of thrombocytopenia. [4,5] Infections like Dengue, Scrub Typhus, Malaria, Typhoid, Miliary TB, HIV, Septicaemia are some of the common causes of fever with thrombo-cytopenia. Thrombocytopenia correlates inversely with mortality and morbidity is various febrile illnesses, serial monitoring of platelet counts has prognostic value. This highlights the importance of thrombocytopenia in various febrile disorders. [6] Timely recognition and treatment of the underlying condition, platelet transfusions are required to prevent fatal outcomes. Hence a need for study to know the clinical profile and complications of fever with thrombocytopenia. The objective of the study was to evaluate the clinical profile of patients with fever and thrombocytopenia, attending Shri Mahant Indresh Hospital, Dehradun.

AIMS AND OBJECTIVES:

- To evaluate clinical profile of fever with thrombocytopenia.
- To identify the cause of fever with thrombocytopenia.
- To assess the clinical complications associated with fever and thrombocytopenia.

MATERIALS AND METHODS:

This study was carried out in the tertiary care teaching hospital and was a Purposive sampling done that include subjects suffering from fever with thrombocytopenia.

Inclusion and Exclusion Criteria:

Inclusion Criteria:

- Both sexes (Male & Female).
- Age ≥ 18 years.
- Patients presenting with fever i.e AM temperature of $>37.2^{\circ}\text{C}$ and PM temperature of $>37.7^{\circ}\text{C}$.
- Platelet count at the time of admission of <1.5 lakhs were included in the study.

Exclusion Criteria:

- Age < 18 years
 - Patients with fever without thrombocytopenia
 - Patients with thrombocytopenia without fever
 - Inherited causes for thrombocytopenia
 - Patients on drugs causing thrombocytopenia
 - Autoimmune causes for thrombocytopenia
- I. HIV infection
 II. Cirrhosis of liver & Hypersplenism
 III. Leukaemia's & Myelodysplastic Syndromes

The diagnostic work up of patients with fever and thrombocytopenia

should include battery of investigations including biochemical tests, haemograms, peripheral smear etc.

OBSERVATION AND RESULTS:

This study was conducted in the Department of Internal Medicine with aim of studying clinical profile and laboratory parameters of fever with thrombocytopenia Further it was aimed to established probable etiology and diagnosis in these patients where ever possible.

There were 100 patients presenting with fever with thrombocytopenia were taken up for study. Among different age groups, males were most commonly involved than females in all age groups in the present study. The male female ratio was 1.44:1 in the present study. Male to female ratio in the present study was 1.44:1. The patients age ranged from 18 years to 67 years with mean age of $33.3.8 \pm 14.19$ years. The maximum occurrence of fever with thrombocytopenia was in the 3rd decade (32%) followed by 2nd decade (23%) and was evenly distributed in 4th and 6th decade 19% and 16% respectively in the present study. Viral fever was the commonest etiology (32%), followed by dengue fever (31%), Scrub Typhus (18%), malaria (12%) in the present study. The duration of fever in the present study ranged from 1-20 days with mean duration of 6.05 3 days, 92% of them had duration of ≤ 10 days. Headache was the most common symptom other than fever (32%) in the present study. Other prominent symptoms in the descending order includes myalgia (31%), vomiting (27%), joint pain (10%) pain abdomen (6%) and altered sensorium (1%). Petechiae contributed to major signs 24% of patients. The hepatosplenomegaly contributed to (21-17%) followed by pallor 16%.

Table 1: Age and sex distribution in present study

Age (years)	Male (n=59)	Female (n=41)
18-20	14	9
21-30	20	12
31-40	10	9
41-50	7	1
51-60	8	8
61-70	0	2

Male : Female ratio 1.44:1

Table 2: Age distribution in different etiology

Age (years)	Dengue	Viral fever	Scrub Typhus	Malaria
18-20	9	8	7	5
21-30	9	16	4	3
31-40	7	4	2	3
41-50	3	0	4	1
51-60	2	4	1	0
61-70	1	0	0	0
Total	31 (31%)	32 (32%)	18 (18%)	12 (12%)

Table 3: Duration of fever on presentation in the present study

Days	No.	%
1-5	55	55
6-10	37	37
11-15	6	6
>15	2	2

Table 4: Symptoms in present study

Symptoms	No.	%
Head ache	32	32
Vomiting	27	27
Pain abdomen	6	6

Joint pain	10	10
Myalgia	31	31
Altered sensorium	1	1
Fever	100	100

Table 5: Signs with present study

Signs	No.	%
Pallor	16	16
Jaundice	7	7
Petechiae	24	24
Hepatomegaly	21	21
Splenomegaly	17	17
Conjunctival	4	4

Table 6: Platelet count in present study

Plateletcount/cumm	No. of Patients	%
10001-20000	5	5
20001-40000	20	20
40001-60000	18	18
60001-80000	27	27
80001-100000	30	30

- In the present study platelet count varied from 10,000 to 1 lakh/cumm with mean platelet count of 62,420 24,104/cumm. 25% of patients had platelet count <40,000/cumm, 18% in the range of 40,001-60,000/cumm, 27% had platelet count in the range of 60,001-80,000/cumm and 30% had platelet count in the range of 80,001-1,00,000/cumm. The platelet count for the patients with bleeding episodes ranged from 18,000-40,000/cumm in the present study.

Table 9: Etiological profile with present study

Diagnosis	No. (n=100)	%
Viral fever	32	32
Dengue	31	31
Scrub Typhus	18	18
Malaria	12	12
Enteric fever	1	1
Sepsis	4	4
Undiagnosed	2	2

- Out of 100 patients of fever with thrombocytopenia other viral fever 32 (32%) was the commonest cause followed by dengue fever 31 (31%), scrub typhus 18 (18%), malaria 12 (12%), septicemia 4 (4%), enteric fever 1 (1%) and 2 (2%) cases remain undiagnosed in the present study.

Table 10: Bleeding episodes in the present study

Site of bleeding	No. of patients	%
Petechiae	17	17
Gum bleeding	1	1
Conjunctival hemorrhage	3	3
Petechiae + Gum bleeding	5	5
Petechiae + Epistaxis	1	1
Malaena	1	1
Petechiae + Conjunctival hemorrhage	1	1

CONCLUSION:

Fever with thrombocytopenia is one of the most challenging problems in the field of medicine. Infection is the commonest cause of fever with thrombocytopenia. Among infection, dengue was the commonest cause. Strong probability of dengue fever, malaria, scrub typhus or other common viral infections should be kept in mind. In majority of patients thrombocytopenia was transient and asymptomatic. Platelet count rises spontaneously with treatment of dengue, scrub typhus and malaria infection, so most of the cases do not require platelet transfusion. There is increased tendency of bleeding in patients with platelet count <20,000/cumm. Platelet transfusion was given to only those patients who have bleeding or platelet count is <20,000/cumm. 2% of the patients remain undiagnosed, which needs work up for some rare infectious causes. Or it could be due to inadequate clinical or laboratory methods.

DISCUSSION:

In a similar study of fever with thrombocytopenia was conducted by Nair et al. A total of 109 cases (76 male, 33 female patients) were studied with the same criteria as in our study. [7] The present study included 100 patients of fever with thrombocytopenia in which males were more affected than females; 59% were male and 41% were females and the ratio being 1.44:1. The patient's age ranged from 18 to

67 years with mean age of 33.38 14.19 years. Other than fever, patients presented with multiple other symptoms, headache was the most common symptom in 32% of patients after fever. Other prominent symptoms were myalgia 31%, vomiting 27%, joint pain 10% pain abdomen 6% and altered sensorium 1%. Most commonly detected signs in the present study were petechiae 24%, hepatomegaly 21%, splenomegaly 17%. Other signs include pallor 16% and conjunctival hemorrhage 4%. The commonest cause was viral fever, 32% in present study. The other etiologies were dengue fever 31%, scrub typhus 18%, malaria 12%, septicemia 4% and enteric fever 1%. Among infections, dengue fever 31% was the commonest cause as compared to other study in which septicemia 27% was the commonest cause. This is more likely due to seasonal and regional variations. Out of 109 patients 62 patients (56.8%) had platelet count between 50,000-1,00,000/cumm followed by 28 patients (25.7%) had count between 20,000-50,000/cumm.

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