



## RESEARCH ARTICLE

# A Clinical Study of Fever with Thrombocytopenia and Manifestations

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### Abstract

Fever with thrombocytopenia in a clinical scenario narrows the differential diagnosis. Infections like malaria, dengue, leptospirosis, typhoid, HIV and millary TB are some of the common causes of fever with thrombocytopenia. Therefore a well organized systemic approach that is carried out with an awareness of causes of fever with thrombocytopenia can shorten the duration of investigations and bring out diagnosis. Hence, a need for study to know the causes and complications of fever with thrombocytopenia.

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## 1 | AIM

The aim of our study is to evaluate clinical profile of fever with thrombocytopenia and to identify the causes of fever with thrombocytopenia Then to assess the clinical complications associated with fever and thrombocytopenia.

## 2 | MATERIAL AND METHODS

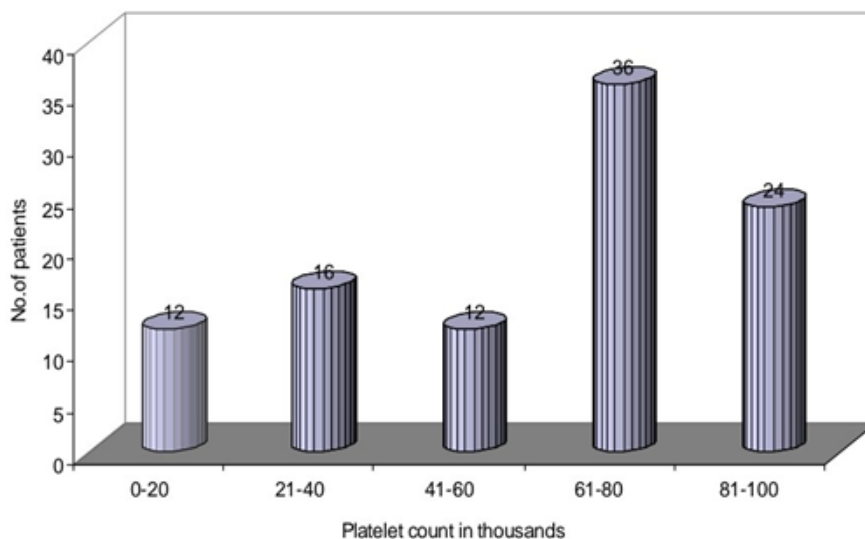
This was a prospective study which was done after obtaining the needed consent from the patients who were admitted in sree mookambika institute of medical sciences .We prospectively collected a series of 100 patients with fever and thrombocytopenia. The patients of both sexes aged > 12 years were icluded. Patients admitted with fever and found to have thrombocytopenia are included in the study. Once the patients admitted with fever and those who had thrombocytopenia, a careful history was recorded, general physical examination was done. Detailed examination of various systems was done. Routine investigations were done, specific investigations for fever with thrombocytopenia such as malaria ,dengue, tyhoid, leptospirosis,HIV ,etc were done according to the needs. Details of history, general physical examination and laboratory and technical investigation reports were noted down from time to time.

**3 | RESULT**

**PRELIMINARY DATA OF THE STUDY**

Total no. of patients	100
Age range in years	18-79 years
Male and female	58:42
Range of duration of hospitalization (days)	3:21
Average duration of hospitalization (days)	7
Definitive diagnosis	100
Malaria as the common cause	41
In malaria, vivax as common cause	20
61,000-80,000 was common range of platelet count at time of admission	36
Clinical manifestation of thrombocytopenia	49
Bleeding manifestations of thrombocytopenia (petichae/ purpura : spontaneous bleeding)	31:18
Good recovery	82
Mortality	18
Septicemia as the common cause of mortality	14
10-20,000 was the range of platelet count in mortality cases	7
Good recovery cases followed up	30

GRAPH SHOWING DISTRIBUTION OF PLATELET COUNT AT THE TIME OF ADMISSION



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Out of 100 cases, a definitive a diagnosis could be made in all of them. Among them malaria was the major cause accounting for 41 cases and 41% of the total cases. In malaria, vivax malaria accounted for 20 cases and 48% of the malaria cases,

followed by falciparum malaria accounted for 13 (32%) cases and mixed malaria accounted for 8 (20%). Second major cause was enteric fever 24 (24%) cases, followed by septicemia 19 (19%), dengue 14 (14%) cases and leptospirosis 2 (2%) cases.

**INCIDENCE OF VARIOUS CAUSES OF FEVER WITH THROMBOCYTOPENIA**

Disease category	No.of patients	Percentage
Malaria	41	41
Enteric fever	24	24
Septicemia	19	19
Dengue	14	14
Leptospirosis	2	2
Total	100	100

Out of 18 mortality cases, 14 cases were due to septicemia accounting for 78% of death was the common cause. 4 cases were due to dengue accounting for 22% of death.

**CAUSES OF MORTLAITY IN OUR STUDY**

Disease category	No.of patients	Percentage
Septicemia	14	78%
Dengue	4	22%
Total	18	100

**4 | DISCUSSION**

A prospective study of 100 patients, who had fever and thrombocytopenia was done in our hospital. The inclusion and exclusion criteria were followed according to the criteria's mentioned in the material and methods of the study. The age range of the patient was 18-79 years, with male and female ratio being 58:42. These factors any way were not considered in our study. The duration of hospitalization was 3-21 days, with an average period of hospitalization being 7 days.

Among the diagnosed cases, malaria formed the largest group with 41%, vivax malaria formed the largest group followed by falciparum malaria and mixed malaria with 48%, 32%, 20% respectively. Other cases diagnosed were Enteric fever 24 cases; Septicemia 19 cases Dengue 14, Leptospirosis 2 cases, constituting 24%, 19%, 14%, and 2% respectively. Common range of platelet count at the time of admission was 61-80,000 in 36 cases, followed by 81-100 thousands in 24 cases, 21-40 thousands in 16 cases, 41-60 thousands in 12 cases and 0-20 thousands in 12 cases.

Clinical manifestation of thrombocytopenia was present only in 49 cases and in 51 cases it was not present. Out of 49 cases which had thrombocytopenic manifestations petichae / purpura was present in 31 cases accounting for 67% and spontaneous bleeding in 18 cases accounting for 33%. In general, 82 cases had good recovery and 18 cases had mortality. In 82 cases who had good recovery 30 were followed up and platelet count were near normal (1.3 – 1.5 lakhs) at the time of discharge. In 18 mortality cases, 14 were due to septicemia – accounting for 78% and 4 were due to dengue accounting for 22% of the total cases. Common range of platelet count in mortality cases was in range of 10-20 thousands in 7 cases, followed by 21-30 thousands in 5 cases, 31-40 thousands in 5 cases and 41-50 thousands in 1 case. During discharge and follow up of 30 patients in our study platelet count showed increasing trends and were near normal (around 1.5 lakhs/cumm). Among infection, malaria was the commonest cause. Malaria; typhoid; dengue, still present clinically in atypical and occult forms, making diagnosis difficult and prolonged. So high index of clinical suspicion is needed. So they should be investigated with some routine and specific test like rapid spot test; IgM ELISA for dengue, IgM ELISA leptospiral antibodies, etc. for correct diagnosis. In majority of patients thrombocytopenia was transient and asymptomatic. In significant number of cases thrombocytopenia lead to various bleeding manifestations and influenced the clinical profile of these febrile illness. Generally, spontaneous bleeding was noted in platelet count <20,000 but in some due to qualitative defects it was seen in platelet count in the range of 40,000 cell cu/mm also. Some patients with platelet count of 10,000 did not have spontaneous bleeding. Spontaneous bleeding patients should be evaluated for disseminated intravascular coagulation also. Platelet count rise rapidly with treatment of malarial infection, so no need of platelet transfusion in malaria cases

## 5 | CONCLUSION

Fever with thrombocytopenia is one of the most challenging problems in the field of medicine. Fever with thrombocytopenia consists of occult presentations of common diseases rather than rare disease.

Infection is the commonest cause of fever with thrombocytopenia. In majority of patients thrombocytopenia was transient and asymptomatic. In significant number of cases thrombocytopenia lead to various bleeding manifestations and influenced the clinical profile of these febrile illness

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