



A STUDY ON CLINICAL AND LAB PROFILE OF FEBRILE THROMBOCYTOPENIA

Medicine

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ABSTRACT

BACKGROUND: Thrombocytopenia is defined as $<150000/\mu\text{l}$ platelet count. This is due to decreased production, increased destruction (immunogenic and non-immunogenic), increased sequestration in spleen. Of these infections being, the commonest cause of thrombocytopenia. At times the fever course is prolonged and fever with thrombocytopenia narrows the differential diagnosis of the clinical entity.

Septicemia: Infections like malaria, dengue, leptospirosis, typhoid, HIV and military 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

AIMS & OBJECTIVES:

1. To evaluate clinical profile of fever with thrombocytopenia.
2. To assess the clinical complications associated with fever and thrombocytopenia.

STUDY DESIGN: Cross sectional observational study.

MEHTOD OF STUDY: The present study was undertaken between the years 2013-2015 at CAIMS (Chalmeda Anandarao Institute of Medical Sciences Karimnagar). We prospectively collected a series of 100 patients with febrile thrombocytopenia

RESULTS: Clinical manifestation of thrombocytopenia was present only in 18 cases and in 88 cases it was not present. Out of 18 cases which had thrombocytopenic manifestations petichae/ purpura was present in 12 cases accounting for 67% and spontaneous bleeding in 6 cases accounting for 33%. In general, 88 cases had good recovery and 12 cases had mortality.

CONCLUSIONS: Fever with thrombocytopenia consists of occult presentations of common diseases rather than rare disease.

KEYWORDS:

FEBRILE THROMBOCYTOPENIA, CML=CHRONIC MYELOID LEUKEMIA, MOS=MULTI ORGAN SYSTEM

INTRODUCTION:

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 history¹

Normal body temperature displays a diurnal pattern with lower values in the early morning hours and higher values in the afternoon. Normal ranges are between 35.8°C (96.5°F) and 37.2°C (99°F). Fever is superimposed on this pattern and thus temperatures are usually greatest in the afternoon and evening. Fever is defined as an elevation of the body temperature above the normal circadian range as the result of a change in the thermoregulatory center located in the anterior hypothalamus.

An AM temperature of $>37.2^{\circ}\text{C}$ (98.9°F) or a P.M. temperature of $>37.7^{\circ}\text{C}$ (99.9°F) would define fever 1.

Thrombocytopenia is defined as platelet count $<150,000/\mu\text{l}$. This is due to decreased production, increased destruction (immunogenic and non immunogenic), increased sequestration in spleen. Of these infections being, the commonest cause of thrombocytopenia.²

At times the fever course is prolonged and fever with thrombocytopenia narrows the differential diagnosis of the clinical entity.

Septicemia: Infections like malaria, dengue, leptospirosis, typhoid, HIV and military TB are some of the common causes of fever with thrombocytopenia^{3,4,5}.

Therefore a well organized systemic approach that is carried out with an awareness of causes of fever with thrombocytopenia^{5,7} can shorten the duration of investigations and bring out diagnosis.

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INCLUSION CRITERIA:

1. The patients of both sexes aged >14 years.
2. Patients admitted with fever and found to have thrombocytopenia (platelet count $<1,50,000$) are included in the study.

EXCLUSION CRITERIA:

Patients other than febrile thrombocytopenia are excluded from the study.

1. ITP
2. Known cases of hematological malignancies

Once the patients are admitted with fever and those who have thrombocytopenia confirmed by peripheral smear, a careful history will be recorded, general physical examination and detailed examination of various systems will be done.

Basic investigations and specific investigations will be done as and when indicated. Details of history, general physical examination and laboratory and technical investigation reports will be noted down from time to time. Once the specific diagnosis is reached, patients will be treated specifically and symptomatically. If bleeding complications are seen platelet transfusions will be considered if platelet count was $<20,000/\text{cumm}$. Total study size is 100 patients of febrile thrombocytopenia.

RESULTS & DISCUSSION:

1. The age range of the patient was 18-85 years, with male and female ratio being 58:42. These factors any way were not considered in our study.
2. The duration of hospitalization was 3-14 days, with an average period of hospitalization being 5 days.
3. A definitive diagnosis was made in all of them in which malaria is the leading cause with 40%.
4. Among malaria group vivax malaria formed the largest group followed by falciparum malaria and mixed malaria with 54%, 32%, 14% respectively.
5. Other cases diagnosed were Enteric fever (24 cases), Septicemia (6 cases) viral fever (10), Dengue (14), Leptospirosis (2), CML (2) and MOS (2) cases constituting 24%, 6%, 10%, 14%, 2%, 2% and 2% respectively [TABLE-1].
6. Common range of platelet count at the time of admission was 61-80,000 in 39 cases, followed by 81-100 thousands in 29 cases, 21-40 thousands in 16 cases, 41-60 thousands in 12 cases and 0-20 thousands in 4 cases.
7. Clinical manifestation of thrombocytopenia was present only in 18 cases and in 82 cases it was not present.
8. Out of 18 cases which had thrombocytopenic manifestations petichae / purpura was present in 12 cases accounting for 67% and spontaneous bleeding in 6 cases accounting for 33%.
9. In general, 88 cases had good recovery and 12 cases had mortality.
10. In 88 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.
11. In 12 mortality cases, 4 were due to septicemia - accounting for 33%, 4 were due to dengue accounting for 33%, cerebral malaria 2 accounting for 16%, CML-1 accounting for 8% and MOS 1 accounting for 8% of the total cases [TABLE-2].
12. Common range of platelet count in mortality cases was in range of 10-20 thousands in 3 cases, followed by 21-30 thousands in 6 cases, 31-40 thousands in 2 cases and 41-50 thousands in 1 case.
13. 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).