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Original Research Paper

A Study of Clinical Profile, Causes and Complications of Fever with Thrombocytopenia

Medical Science

KEYWORDS : fever, thrombocytopenia, scrub typhus, dengue, ARDS

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ABSTRACT

Fever is the most common presentation among all diseases.

Methods: *This study was done in 100 patients who were admitted in Department of General Medicine, MGMC&RI. Patients were evaluated with detailed history, physical examination, routine and specific investigations being done to know the cause and the complications and were treated accordingly.*

Results: *Out of 100 patients, infections were the most common causes. Among these, dengue (43%) was the leading cause, followed by scrub typhus (20%), malaria (18%) and enteric fever (8%) and others 2%. Incidence is more in males than females; more among the younger age group. Complications were more in elderly females and death was reported in three patients.*

Conclusion: *In our study of fever with thrombocytopenia common cause is infections and more in younger age group and in males. Though complications are few, significant number of patients had complications.*

INTRODUCTION

Fever is a common presenting feature of disease since ancient times. Fever is often associated with various sickness patterns, in metabolic and physiological characteristics of body systems and alterations in immune responses. Therefore fever remains significant contributor to the clinical presentation, pathogenesis and the result of many illnesses.

Fever with thrombocytopenia is a usual clinical presentation in the medical wards and associated with significant complications and mortality. Infective causes like dengue and malaria are well known for fever with thrombocytopenia. Only a few studies are available for enteric fever and malaria. There are not many studies involving other infections for thrombocytopenia.

This study has been undertaken to know the modes of clinical presentation and possible causes of fever with thrombocytopenia in tropical country like India, where the other causes of infection could be established like dengue, enteric fever, malaria, leptospirosis, hepatitis B, HIV infection, scrub typhus etc. There may be other infections where the etiology cannot be pointed out because of lack of facilities or awareness.

Aims of the study were

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

Material and methods:

A clinical prospective observational study done on 100 patients admitted with fever with thrombocytopenia in Mahatma Gandhi Medical College and research institute, Pondicherry, South India. In-patients of both sexes aged above 18 years with fever and thrombocytopenia were included.

Exclusion criteria were

Patients less than 18 years.

- Patients with fever and no thrombocytopenia.
- Patients with non-infective etiology like ITP, drug induced.
- Patients were evaluated with history, examination, routine and necessary investigations. All the obtained results pertaining to the patients were documented.

Table 1: Blood culture reports of the patients:

Blood CS	No. of patients (n=100)	%
No Growth	80	80.0
Growth	20	20.0
E.coli	6	6.0
Klebsiella	2	2.0
Pseudomonas	1	1.0
Salmonella typhi	10	10.0
Staphylococcus aureus	1	1.0

Table 2: Diagnosis of patients:

Diagnosis	No. of patients (n=100)	%
A .Dengue	43	43.0
B. Scrub typhus	20	20.0
C. Malaria	18	18.0
D. Sepsis	9	9.0
E. Enteric fever	8	8.0
F.Infective endocarditis	1	1.0
G .Leptospirosis	1	1.0

TABLE 3: Incidence of complications in the patients:

Complications	No.of patients (n=100)	%
Nil	80	80.0
Yes	20	20.0
A. ARDS	7	7.0
B .AKI	5	5.0
C. ICETERUS/MELENA	4	4.0
D. PETECHIE	4	4.0
Bleeding GUMS	3	3.0
DEATH	3	3.0
POLYSEROSITIS	1	1.0

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Discussion

This study was done in 100 admitted patients who presented with a history of fever and who had thrombocytopenia. All the patients included in this study were according to inclusion and exclusion criteria. The Incidence of fever with thrombocytopenia was more common in younger age group and the incidence was more in male comparing to females, which was similar to study done by Shanker et al[1]. Among 100 patients the most common etiology was dengue which was seen in 43 patients followed by scrub typhus in 20 patients and malaria in 18 patients, septicemia in 9 and enteric fever in 8 and infective endocarditis and leptospira one each. Scrub typhus was the commonest cause of fever with thrombocytopenia in study by Chrispal et al[2]. In malaria, Plasmodium vivax was most common which was seen in 15 patients when compared to Plasmodium falciparum seen in 3 patients. In study done by Kochar DK et al 49.34% were positive for Plasmodium falciparum and 43.23% were Plasmodium vivax[3]. In scrub typhus eschar was seen in 10 patients. Out of 100 patients the distribution of platelets in 68 patients was in the range of 50,000 – 1, 00,000/mm3 followed by 24 patients who showed platelet count below 50,000/mm3.

Complications were seen in 20 patients in the form of ARDS, AKI and minor bleeding manifestations like bleeding gums, petechiae. ARDS was reported in seven and acute kidney injury in five patients. Prevalence of complications was more in females above forty years associated with comorbidities. Death was reported in 3 patients, 2 patients had dengue shock syndrome and one patient had scrub typhus with ARDS. All other patients were treated according to the cause. Gradually the platelet count improved and all recovered.

CONCLUSIONS

In our study of fever with thrombocytopenia common cause is infections and more in younger age group and in males. Though complications are few, significant number of patients had complications and more in adult females with comorbidities

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