Assessment of clinical profile of patients with thrombocytopenia

Dr. Saubhagya chhotaray[1], Dr. Bijan kumar panda[2], Dr.Sailendra Nayak[3], Dr. Desabandhu Behera[4*]

[1]Assistant professor, Department of Emergency Medicine, Bhima Bhoi Medical College and Hospital, Balangir, Odisha, India

[2]Assistant professor, Department of community Medicine, Bhima Bhoi Medical college, Balangir, Odisha, India

[3]Assistant professor, General Medicine, KIMS and PBMH, Odisha, India

[4*]Assistant professor Department of Medicine, Bhima Bhoi Medical college, Balangir, Odisha, India

Email: dbsb2009@gmail.com

DOI: 10.47750/pnr.2022.13.S06.089

Abstract

Background: Thrombocytopenia is characterized as platelet tally less than 1,50,000/µL. This is because of diminished creation, expanded obliteration, and expanded sequestration in spleen. The present study was conducted to assess clinical profile of patients with thrombocytopenia.

Materials & Methods: 94 patients of fever with thrombocytopenia of both genders were included. In patients with bleeding complications, platelet transfusions were done if platelet count was <20,000/µL. Etiologic and clinical data of all the patients was recorded.

Results: Out of 94 patients, males were 50 and females were 44. Etiology was malaria in 19, viral fever in 33, dengue fever in 25, scrub typhus in 11 and septicaemia in 6 cases. Clinical symptoms were cough seen in 30, fever in 94, headache in 57, pallor in 35, chills & rigors in 38, rashes in 56, jaundice in 15 and bleeding in 2 patients. In fifty seven percent of the cases, platelet count was between 100000 to 150000 per cubic mm.

Conclusion: Infectious diseases accounts for most of the cases of febrile thrombocytopenia. Most common cause was malaria, viral fever , dengue fever, scrub typhus, septicaemia and leptospirosis.

Keywords: Cough, Fever, Thrombocytopenia.

INTRODUCTION

Fever has been recognized as a cardinal manifestation of disease since ancient times, as recorded by ancient scholars like Hippocrates. 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.1 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 36.5°C and 37.5°C (97.7°F and 99.5°F). Fever is superimposed on this pattern and thus temperatures are usually greatest in the afternoon and evening.2 Fever is defined as an elevation of the body temperature above normal circadian range as a result of change in the thermoregulatory center located in the anterior hypothalamus. An AM temperature of >37.2°C (98.9°F) or a P.M. temperature of > 37.7°C (99.9°F) would define fever.3

Thrombocytopenia is characterized as platelet tally less than 1,50,000/µL. This is because of diminished creation, expanded obliteration, and expanded sequestration in spleen. The most common etiology behind this in febrile cases are expanded sequestration in the spleen, diminished creation and expanded obliteration.4 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.5 The present study was conducted to assess clinical profile of patients with thrombocytopenia.

Materials & Methods

The present study was conducted in a tertiary care hospital of Balangir from Dec 2020 to Nov 2021, which comprised of 94 patients of fever with thrombocytopenia of both genders. The written consent was taken from all the participants of the study. All the patients presenting with the complaints of fever (>99.9degree F) with thrombocytopenia (less than 1,50,000/µL) were included in study. Patients having afebrile thrombocytopenia and those were less than 15 years of age were excluded from the study. Data such as name, age, gender etc. was recorded. A complete detailed history of all the patients was recorded followed by a thorough clinical examination. Laboratory investigation of all patients was recorded. In patients with bleeding complications, platelet transfusions were done if platelet count was <20,000/µL. Aetiologic and clinical data of all the patients was recorded. Data thus obtained were subjected to statistical analysis.

Results

Table I Distribution of patients

Total- 94		
Gender	**Males**	**Females**
Number	50	44

Table I shows that out of 94 patients, males were 50 and females were 44.

Table II Assessment of etiology

Etiology	**N=94**	**%**
Malaria	19	20.2
Viral fever	33	35.1
Dengue fever	25	26.6
Scrub typhus	11	11.7
Septicaemia	6	6.4

Graph I Assessment of aetiology

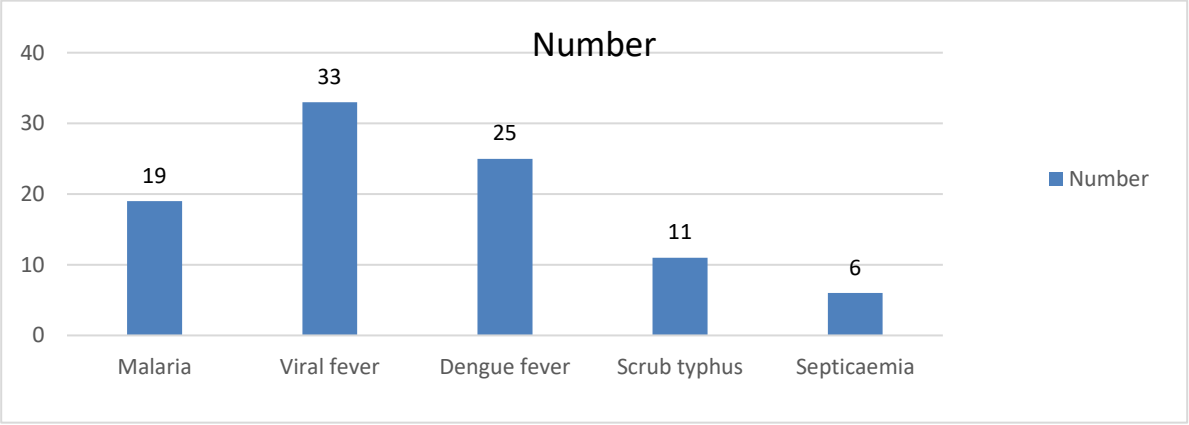

Table II and graph I shows that aetiology was malaria in 19, viral fever in33, dengue fever in 25, scrub typhus in 11, septicaemia in 6 cases.

Table III Clinical presentation of cases

Clinical presentation	Number	%
Cough	30	31.9
Fever	94	100
Headache	57	60.6
Pallor	35	37.2
Chills & rigors	38	40.4
Rashes	56	59.6
Jaundice	15	16
Bleeding	2	2.9

Graph II- Clinical presentation of cases

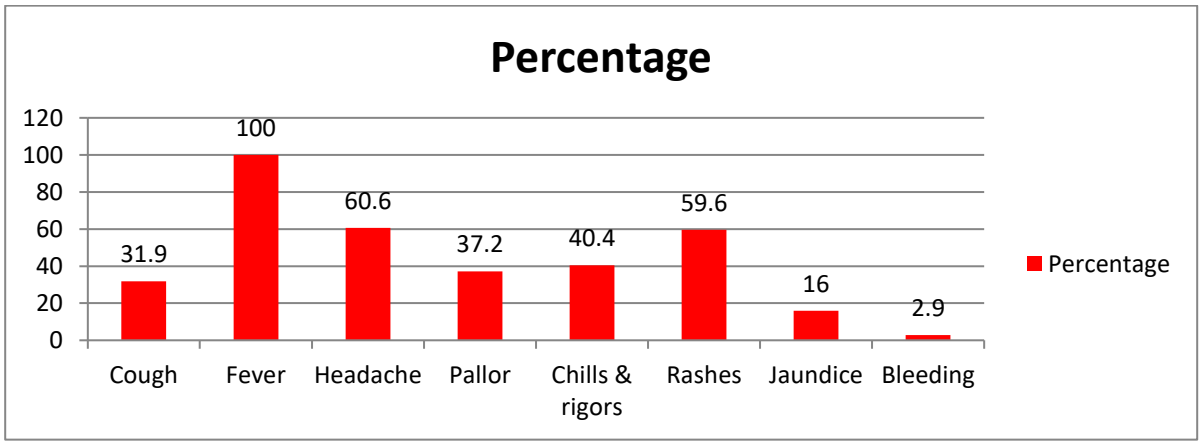

Table III and graph II shows that clinical symptoms of cough was seen in 31.9%, fever in 100%, headache in 60.6%, pallor in 37.4%, chills & rigors in 40.4%, rashes in 59.6%, jaundice in 16% and bleeding in 2.9% of patients.

Table-IV Thrombocytopenia cases

Platelet count	Number of cases	%
Less than 20000 per cubic mm	2	2
20000 to 50000 per cubic mm	7	8
50000 to 100000 per cubic mm	31	33
100000 to 1500000 per cubic mm	54	57

Graph-III

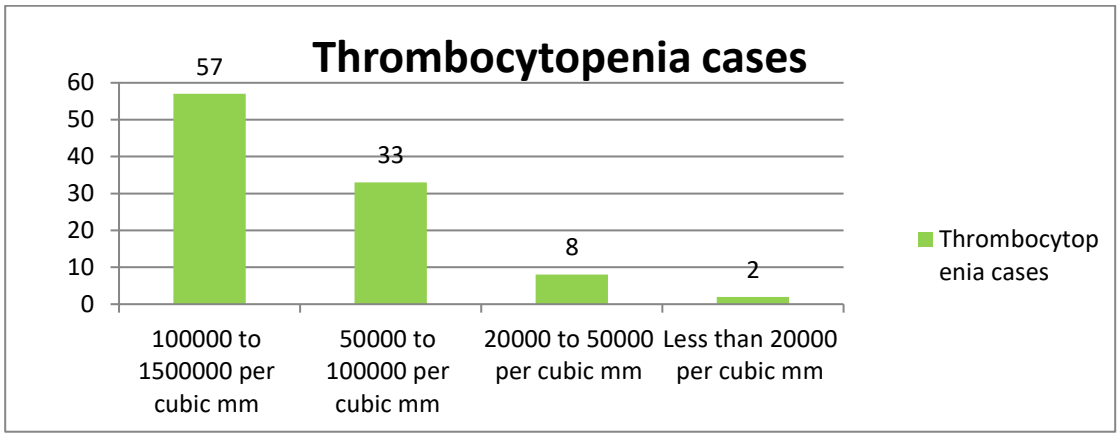

Table IV and graph shows that in 33% percent of the cases, platelet count was between 50000 to 100000 per cubic mm, 57% cases had platelet count between100000 to 150000 per cubic mm, 8% cases had platelet count between 20000 to 50000 per cubic mm and 2% cases had platelet count less than 20000 per cubic mm.

Discussion

Pyrexia is an inevitable and pandemic concern since ancient times, craftsmanship and science.6 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.7 The most common occurrence of delayed fever cases are instances of firmly understood sickness presenting them atypically.8 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.9 The present study was conducted to assess clinical profile of patients with thrombocytopenia.

We found that out of 94 patients, males were 50 and females were 44. Aetiology was malaria in 19, viral fever in 33, dengue fever in 25, scrub typhus in 11, and septicaemia in 6 cases. Latha V et al10 in their study a total of 120 patients were studied. The patient age ranged from 18 years to 70 years and the mean age was 35.38 years and the male '(n=72) patients were more than female (n=48) patients. The diseases which contributed mainly to febrile thrombocytopenia in our study were Dengue (26.6%), Malaria (20.2%), and septicemia (6.4%), Scrub typhus (11.7%) and viral fever for (35.1%) of cases. The duration of fever ranged from 1-13 days with mean duration of 6.05 days. Headache was the most common symptom other than fever in the present study. Spontaneous bleeding was seen 02 numbers of patients.

We found that clinical symptoms were cough seen in 30, fever in 94, headache in 57, pallor in 35, chills & rigors in 38, rashes in 56, jaundice in 15 and bleeding in 02 patients. Hariprasad et al11 analysed the clinical profile of febrile thrombocytopenia. Out of total 200 cases, fifty-two cases were due to viral fever while fifty-seven cases were due to malaria. Jaundice and cough were present in 52 and 58 cases respectively. In fifty five percent of the cases, platelet count was between 50000 to 10000 per cubic mm.

Bhushan et al12 in their study 100 patients of more than 12 years of age having a fever as presenting symptom with thrombocytopenia were included in the study. 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.

Raikar et al13 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

The limitation the study is small sample size.

Conclusion

Authors found that infectious diseases accounts for most of the cases of febrile thrombocytopenia. Most common cause was malaria, viral fever, dengue fever, scrub typhus and septicaemia.

REFERENCES

1. Guzman MG, Kouri G. Dengue and dengue hemorrhagic fever in the Americas: Lessons and challenges. J Clin Virol. 2003;27:1-13.
2. Gibbons RV, Vaughn DW. Dengue: An escalating problem. BMJ. 2002;324:1563-6.
3. Thomas SJ, Strickman D, Vaughn DW. Dengue epidemiology: Virus epidemiology, ecology, and emergence. Adv Virus Res. 2003;61:235-89.
4. Pancharoen C, Thisyakom U. Neurological manifestations in dengue patients. Southeast Asian J Trop Med Public Health. 2001;32:341-5.
5. Murthy JM. Neurological complications of dengue infection. Neurology India. 2010;58:581-4.
6. Fariz-Safhan MN, Tee HP, Abu Dzarr GA, Sapari S, Lee YY. Bleeding outcome during a dengue outbreak in 2005 in the East-coast region of Peninsular Malaysia: A prospective study. Trop Biomed. 2014;31:270-80.
7. Wahid SF, Sanusi S, Zawawi MM, Ali RA. A comparison of the pattern of liver involvement in dengue hemorrhagic fever with classic dengue fever. Southeast Asian J Trop Med Public Health. 2000;31:259-63.
8. Makkar RP, Mukhopadhyay S, Monga A, Monga A, Gupta AK. Plasmodium vivax malaria presenting with severe thrombocytopenia. Braz J Infect Dis. 2002;6:263-5.
9. Gondhali MP, Vethekar M, Bhangale D, Choudhary K, Chaudhary M, Patrike G. Clinical assessment of fever with thrombocytopenia-A prospective study. International Journal of Medical Research and Health Sciences. 2016;5(1):258-77.
10. Latha V. Evaluation of clinical profile of febrile thrombocytopenia. International Journal of Health and Clinical Research, 2022;5(2):465-467.
11. Hariprasad S, Sukhani N. Evaluation of clinical profile of febrile thrombocytopenia: an institutional based study. Int J Adv Med 2017;4:1502-5.
12. Bhushan M, Singh P. Clinical profile evaluation of febrile thrombocytopenia. International Journal of Medical Science and Education 2018;7-11.
13. Raikar SR, Kamdar PK. Clinical and Laboratory Evaluation of Patients with Fever with Thrombocytopenia. Intern Med 360 Indian J Clin Pract [Internet]. 2013;24(4).