International Journal of Advances in Medicine
Karunakar et al. Int J Adv Med. 2021 Feb;8(2):224-227
http://www.ijmedicine.com
pISSN 2349-3925 | eISSN 2349-3933
DOI: https://dx.doi.org/10.18203/2349-3933.ijam20210268

Original Research Article

A prospective study of clinical pattern of febrile thrombocytopenia in government general hospital, Nalgonda

Yadavendra C. Reddy[1], Karunakar[2]*

[1]Department of Medicine, ESIC Medical College, Hyderabad, Telangana, India
[2]Department of Medicine, GMC Nalgonda, Telangana, India

Received: 11 December 2020
Accepted: 11 January 2021

***Correspondence:**
Dr. Yadavendra C. Reddy,
E-mail: chamareddy_07@yahoo.com

ABSTRACT

Background: Febrile thrombocytopenia is a usual condition caused by infections such as dengue, malaria, typhoid, septicimea and certain viral infections. The present study is aimed to study the aetiology of fever with thrombocytopenia and the clinical presentation in the patients admitted in Government General Hospital.
Methods: This prospective observational study was done from August 2019 to September 2019 in Government General Hospital Nalgonda. A total of 100 cases male and female admitted with febrile thrombocytopenia were studied based on inclusion and exclusion criteria. All patients were done routine investigations and ELISA test for dengue done in susceptible patients. Patients below 12 years, pregnant women and patients with previous bleeding manifestations were excluded from the study. The study was carried out in all patients fulfilling the inclusion and exclusion criteria.
Results: A total of 100 patients 60 females and 40 males presented during the study period. Most of the fevers with low platelet count were viral 30 (30%), dengue 25 (25%), typhoid 20(20%), malaria 15 (15%), hepatitis 10 (10%). The patients presented with fever 25 (25%), nausea 20 (20%), headache 20 (20%) abdominal ain 15 (15%), diarrhea 10 (10%), bleeding manifestations 5 (5%), myalgia 5 (5%).
Conclusions: It was observed from the study that the viral infections were predominant cause for the fevers with thrombocytopenia followed by dengue, typhoid and malaria, furthur it was observed that apart from fever nausea and headache were predominant symptoms in patients presenting with febrile thrombocytopenia. Major complications were avoided by timely admission and proper care of the patients.

Keywords: Dengue, Elisa, Febrile, Hepatitis, Myalgia, Nausea, Thrombocytopenia

INTRODUCTION

From ancient times fever has been considered a cardinal manifestation of disease as regarded by scholars like Hippocrates.[1] Fever is derived from pyrexia, in Greek "pyretus" meaning fire. The word febrile was originated from the Latin word "Febris" meaning fever.[2] It is a cardinal sign that describes increase in internal body temperature to the level above normal. It is seen first as a disease but later recognized as an accompaniment of a variety of disease entities.[3] It is considered as one of the body's immune mechanism to attain neutralisation of perceived threat inside the body.[4] Fever is easily noted and reliable marker of illness. Many times fever is associated with thrombocytopenia.[5] During monsoon and perimonsoon periods febrile patients with thrombocytopenia were commonly encountered by physicians. Patients with acute febrile illness in a tropical country like India usually have an infectious etiology and may have associated thrombocytopenia. Infections with bacteria, viruses and protozoa can cause thrombocytopenia. Commonly dengue, typhus, malaria and other viral ricketessial infections, meningococci, typhoid, leptospira, miliary TB, HIV, septicaemia and

other viral infections present fever with thrombocytopenia. Thrombocytopenia is defined as decreased number of platelets below 1 lakh.[6] Impaired platelet production, accelerated platelet destruction or dilution and/or sequestration in spleen are the causes of thrombocytopenia.[7] There is no absolute relation between platelets and bleeding. Certain broad generalisations can be made with counts less than 10,000 bleeding is usual and may be severe.[8] Thromocytopenia is characterized by bleeding most often from small blood vessels. This can manifest as petechiae from skin, haemorrhages from mucosa of gastrointestinal and genitourinary tract. Intracranial haemorrhage is a serious consequence in thrombocytopenic events. Thrombocytopenia associated with fever will help narrow the differential diagnosis and management of fever. Patients present with varied clinical manifestations and this manifestations range from asymptomatic or simple viral illness to severe circulatory shock. So, timely resuscitation and treatment of the underlying condition, platelet transfusions are required for preventing fatal outcomes. Although febrile thrombocytopenia is very common in South India studies on febrile illness are lacking.

METHODS

The present prospective observation study was done in Department of general medicine in Government General Hospital Nalgonda from August 2019 to September 2019. A total of 100 cases of febrile thrombocytopenia were studied during the period based on inclusion and exclusion criteria. All patients were done routine investigations like CBP, platelet count, serum electrolytes, liver function tests, renal function tests. Special investigations like Elisa, Dengue NS1,Ig G and IgM were done. All patients were managed conservatively by giving antipyretics, iv fluids and were discharged in stable condition.

Inclusion criteria

Patients having platelet count <1,50,000, both male and female less than 12 years, fever of less than 2 weeks duration were included in the study.

Exclusion criteria

Chronic illness causing thrombocytopenia like ITP, SLE, drug induced thrombocytopenia, patients having pregnancy were excluded from the study.

The statistical software SPASS was used to analyze the data and Microsoft word and excel have been used to generate graphs, figure etc.

RESULTS

Of all the patients 40 (40%) were males and 60 (60%) were females with female preponderence. The patients admitted were more in the age group 20-30 around 30 (30%) followed by age group below 20 around 23 (23%). Based on the platelet count range most of the patients were in the range between 50,000-1,00,000 around 40 (40%) followed by >1,00,000 range around 30 (30%). Few patients had platelets below 20,000 around 10 (10%) with bleeding manifestations. Most of the patients with thrombocytopenia had viral fever around 30 (30%). Followed by dengue 25 (25%), typhoid 20 (20%), malaria 15 (15%). Few patients with thrombocytopenia had altered liver parameters around 10 (10%). Based on clinical manifestations most of them presented with fever 25 (25%), nausea 20 (20%), abdominal pain 15 (15%), headache 20 (20%), myalgia 5 (5%), bleeding manifestations 5 (5%), diarrhea 10 (10%).

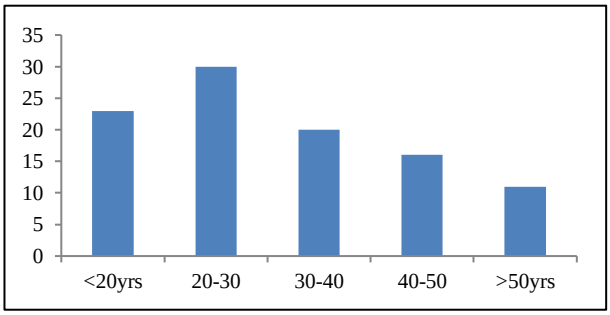

Figure 1: Gender distribution.

In Figure 1 there is a depiction of female preponderance with females 60 vs males 40 in the ratio M:F (2:3).

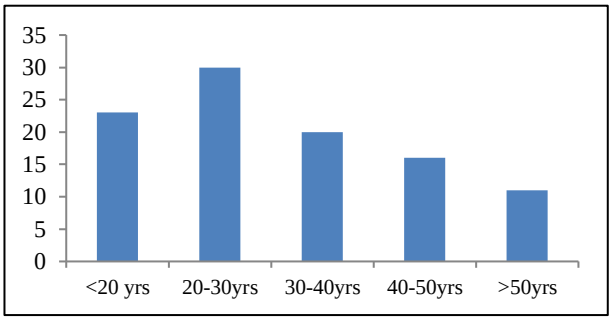

Figure 2: Age group.

In Figure 2 the patients with febrile thrombocytopenia are more in the age group 20-30 years followed by patients in the age group below 20 years.

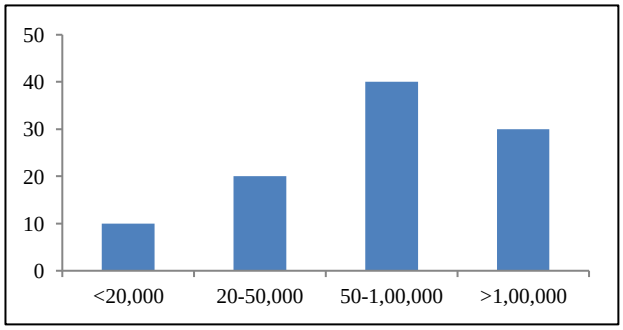

Figure 3: Platelet count pattern.

In Figure 3 the patients with platelet count 50,000-1,00,000 are more compared to other platelet count range.

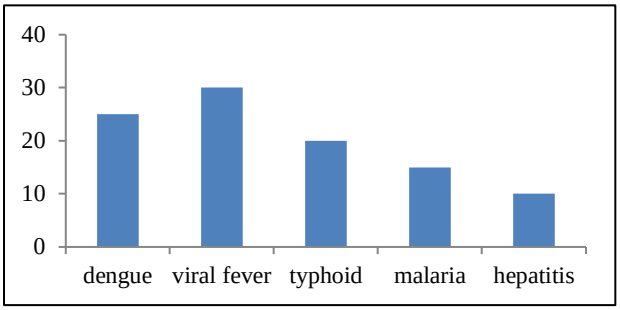

Figure 4: Clinical aetiology pattern.

In this Figure the patients with febrile thrombocytopenia due to viral fevers are more than other infections.

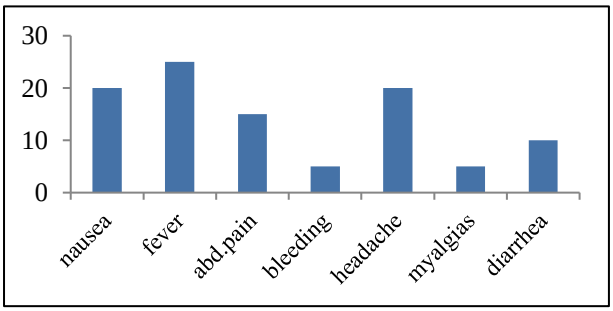

Figure 5: Symptoms distribution.

In Figure 5 the symptom distribution shows that patients complained of fever followed by nausea and abdominal pain.

DISCUSSION

In all out of 100 cases 40 (40%) were male and 60 (60%) were female showing female preponderance. In a study done by Gondhal et al results showed male preponderance with males 56% and females 44%.[9] In another study conducted by Durbesula et al 88 (58.7%) were male and 62 (41.3%) were female patients.[10] The most common age group in our study was between 20-30 years around 30 (30%) while in Gondhal et al it was around 26%.[9] In our study viral fevers were leading cause of febrile thrombocytopenia around 30 (30%) while in Gondhal et al dengue 68.9% was the common cause. In our study dengue was the second most common cause around 25 (25%) for febrile thrombocytopenia. In our study 40% of the patient had platelet count between 50,000-1,00,000 which is not in concordance with Gondhali and Modi et al studies.[9,11] In Gondhali et al study 78% had had platelet count >50,000, 15% between 20,000-50,000 and 3 had platelet count below 10,000. In our study 10 patients had platelet count below 20,000 between 20-50,000 there were around 20 patients; and 30 patients had platelet count above 1,00,000. In Modi et al 78% had platelet count above 50,000. In our study bleeding manifestations were present in 5 patients. There were no deaths with febrile thrombocytopenia compared 5% in Patil et al study.[12] Acute liver failure was noted in 10 patients with thrombocytopenia compared to other studies where MODS was the common complication.[13,14] Incidence was more common in monsoon season in concordance with other studies.[15,16]

CONCLUSION

Now a days febrile thrombocytopenia is an emergency problem in the field of medicine. Dengue being the commonest cause of febrile thrombocytopenia manifesting with seasonal variations commonly seen in monsoon season with cumulative effect of endemicities in that particular region. Common complications of dengue being varied bleeding manifestations secondary to thrombocytopenia showing no direct correlation between platelet count and severity of bleeding as well as to mortality and morbidity. Prompt diagnosis and appropriate treatment of underlying etiology of febrile thrombocytopenia with maintenance of platelet count, adequate hydration and symptomatic management gives good recovery and better outcome. Furthur cleanliness of the surroundings and breeding places of mosquitoes should be disinfected and disposed of. Awareness programmes to be done for the complications of dengue fever with thrombocytopenia on a war footing .Local bodies should be involved in maintaining the surroundings clean and conducting awareness programmes with the help of health professionals so that this deadly disease can be tackled effectively.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Larson EB, Featherstone HJ, Peterfdorf RG. Fever of undetermined origin. Diagnosis and Follow up of 105 cases, 1970-1980. Medicine 1982;61:269-92.
2. Lee TL, Stitt JT. Disorders of temperature regulation. Compr Ther. 1995;21:697.
3. Nolan SM, Fitzgerald FD. Fever of unknown origin-The general Internist's approach. Postgraduate Med. 1987;81(5):190-205.
4. Mackowiak PA, Wasserman SS, Levine MM. A critical appraisal of 98.6 degrees F, the upper limit of the normal body temperature, and other legacies of Carl Reinhold August Wunderlich. J Am Med Asso. 1992;268:1578.
5. Patil P, Solanke P, Harshe G. To study clinical evaluation and outcome of patients with febrile thrombocytopenia. Int J Sci Applied Res. 2014;4(10):1-3.
6. Kumar A, Aster. Robbins and cotran pathologic basis of disease. 8th edition. Elsevier Health Sciences Division. 2010:687.

7. Levine SP. Wintrobe's Clinical Haematology. 10th ed. Philadelphia Lippincott Williams and Wilkins Publishers. 1993:1579-1632.
8. Colman RW, Hirsch J, Marder VJ, Salzman EW. Hemostasis and thrombosis-basic principles and clinical practice. Philadelphia: Lippincott Williams and Wilkins. 1982:246-247.
9. Gondhali MP, Vethekar GM, Bhangale D, Choudhary K, Chaudhary M, Patrike G, Kundgir A. Clinical assessment of fever with thrombocytopenia - a prospective study. Int J Med Res Health Sci. 2016;5(1):258-77.
10. Durbesula AT, Reddy CKB, Usham G, Durbesula RK. Clinical profile of fever with thrombocytopenia in tertiary hospital, Nellore. J Med Sci Clin Res. 2016;4(9):12595-601.
11. Modi TN, Mehta AD, Santosh A, Modi S. Clinical profile of febrile thrombocytopenia: a hospital-based cross-sectional study. J Res Med Dental Sci. 2016;4(2):115-20.
12. Patil P, Solanke P, Harshe G. To study clinical evaluation and outcome of patients with febrile thrombocytopenia. Int J Scientific Res. 2014;4:1-3.
13. Nakhale BD, Bhagat JP, Dube AH. Study of febrile thrombocytopenia in adults. Int J Recent Trends Sci Tech. 2016;18(1):197-201.
14. Kumar P, Chandra K. A clinical study of febril thrombocytopenia: a hospital based retrospective study. Indian J Clin Practice. 2014;24(10):952-7.
15. Kumbhar SS. A Study of clinical and laboratory profile of patients having fever with thrombocytopenia and its outcome. Indian J Basic Applied Med Res. 2017;6(2):282-9.
16. Raikar S, Kamdar P, Dabhi A. Clinical and laboratory evaluation of patients with fever with thrombocytopenia. Indian J Clin Practice. 2013;24:360-2.

Cite this article as: Karunakar, Reddy YC. A prospective study of clinical pattern of febrile thrombocytopenia in government general hospital. Int J Adv Med 2021;8:224-7.