



A STUDY ON CLINICAL INFORMATION, TREATMENT OPTIONS AND COMPLICATIONS FOR FEVER WITH THROMBOCYTOPENIA

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ABSTRACT **Background:** Infection is the common cause of thrombocytopenia. Detection of thrombocytopenia associated with a fever helps to narrow the differential diagnosis and management of fever. It also allows us to know the various diagnosis and management of thrombocytopenia and its management and outcomes for patients. **Objective:** The main objectives of this study are to identify the cause of fever with thrombocytopenia, to study the prevalence of complications and to analyse the outcomes of the patient. **Method:** It is a Hospital-based prospective observational study, in which the patients were enrolled on the study after taking an informed consent form from them based on the inclusion and exclusion criteria. **Results:** Out of 60 patients suffering from fever with thrombocytopenia Males 40(67%) are more predominant among the study population when compared to female patients. The most common cause is dengue fever 28(47%), followed by malaria 13(22%) and typhoid 8(13%). Among 60 patients 10(17%) patients had bleeding signs and 50(83%) patients had without bleeding signs, 4(40%) patients had signs of melena, 3(30%) patients had signs of bleeding gums, 2(20%) patients were having signs of petechiae and 1(10%) patients with signs of haematuria. **Conclusion:** Infections particularly dengue fever are the most common cause of fever with thrombocytopenia. The majority of the patients with thrombocytopenia are symptomatic but in a significant number of patients, there were bleeding manifestations also. Melaena was the commonest bleeding manifestation. On treating the specific cause drastic improvement in platelet count was noted. Platelet transfusion was done only if bleeding was present or the platelet count was <10,000 cells/mm3

KEYWORDS : Thrombocytopenia, Bleeding Manifestations, Fever

INTRODUCTION:

A fever is characterized as a rise in body temperature that occurs outside of the typical circadian range and is brought on by modifications to the anterior hypothalamic thermoregulatory region. Fever is defined as a temperature in the AM of more than 37.2°C (98.9°F) or in the PM of more than 37.7°C (99.9°F)1.

A platelet count of less than 1,50,000/μL is referred to as thrombocytopenia. Bleeding, usually from tiny vessels, is a characteristic of thrombocytopenia. Infections like dengue, leptospirosis, malaria, typhoid, military TB, HIV, and septicaemia are some of the common causes of fever with thrombocytopenia2.

Consequently, the differential diagnosis of the clinical entity is narrowed and a diagnosis is made using a methodical, well-organized strategy that is implemented while keeping in mind the causes of fever associated with thrombocytopenia3.

To avoid deadly consequences, the underlying disease must be identified quickly and treated with platelet transfusions. Therefore, research is required to understand the clinical characteristics and consequences of fever associated with thrombocytopenia4.

MATERIALS AND METHODS

Study Design and Study Setting

A hospital-based prospective observational study was conducted for a period of six months at the General medicine departments of the government general hospital (Rajiv Gandhi Institute of Medical Sciences, Kadapa, Andhra Pradesh, India).

Study Population

A total of 60 patients both male and female were selected by using inclusive and exclusive criteria.

Patients who are more than 14 years of age, and the patients who are

presented with complaints of fever (>99.9°F) with thrombocytopenia (<1,50,000/μL) were enrolled in this study.

Patients with afebrile thrombocytopenia, patients less than 14 years old, and patients unwilling to sign the informed consent form were not allowed to participate in this study.

Ethical statement

This study was approved by the institutional ethical committee, after getting the approval informed consent was obtained from the participants who agreed to participate in the study.

Statistical Analysis

First, we will enter the data in Microsoft Excel 2017 manually, and the data will be analyzed using SPSS Software.

The data from the data collection form will be analyzed for different parameters. For the analysis of the data, descriptive statistics such as percentages, frequencies, mean, and standard deviation were used.

RESULTS

In a total of 60 samples collected males were more in number and they are about 40(67%), and females were less in number when compared to males 20(33%), this indicates males are more predominant among the study population when compared to female patients.

In our study, Out of 60 patients suffering from fever with thrombocytopenia 10(17%) patients were with bleeding signs, and 50(83%) patients were without bleeding signs.

Out of 10 cases of bleeding manifestations among them 4(40%) patients were having signs of melena, 3(30%) patients were having signs of bleeding gums, 2(20%) patients were having signs of petechiae and 1(10%) patient with signs of haematuria.

Among 60 patients, drug regimens were planned using different categories of drugs which highly prescribed drugs were antibiotics, followed by analgesics and antipyretics. NSAIDS and antihistamines are the least prescribed.

DISTRIBUTION BASED ON GENDER



Figure 1: Percentage of patients with fever with thrombocytopenia

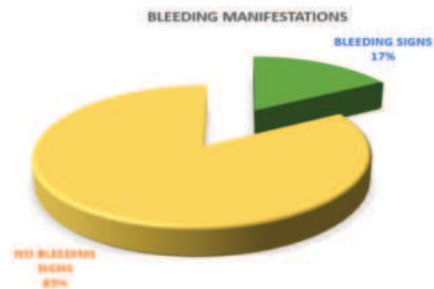


Figure 2: Percentage of patients with Bleeding Manifestation



Figure 3: Percentage of patients with a type of Bleeding manifestation

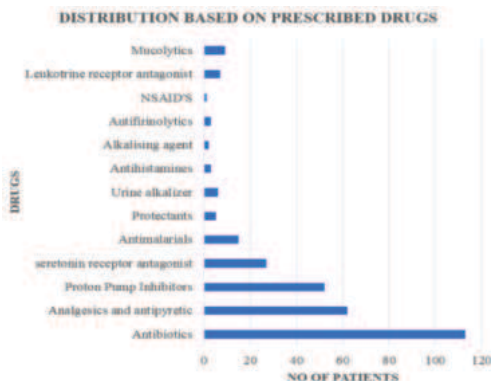


Figure 4: Distribution based on prescribed drugs

DISCUSSION

In our study, we found that the commonest age group amongst the study population prone to fever with thrombocytopenia was 11-20 years (28%). D.K. Suneetha et al,[5] conducted a study, according to this study the commonest age group prone to fever with thrombocytopenia was 18-24 years (30%).

In our study out of 60 cases recruited, 40(67%) were males and 20(33%) were females. There was male predominance (67%) amongst the study population as compared to females (33%). Suresh et al,[6] conducted a study, according to this study, similar results were found with male (54%) predominance when compared with females (46%).

Nair PS et al,[7] conducted a study, according to this study there was male (76) predominance amongst the study population when compared to females (33). Similarly in another study conducted by Rekha et al,[8] there was male predominance 162(49.4%) amongst the study population when compared to females 166(50.4%).

In our study, we found that the commonest cause of thrombocytopenia was Dengue 28(47%), followed by malaria 13 (22%) and typhoid 10(17%). M.P. Gondali et al,[9] conducted a study, Dengue with 56 cases was the leading cause of fever associated with thrombocytopenia. The second general cause was septicemia 17, followed by malaria 15, HIV 5, Viral hepatitis 4, and enteric fever 3 cases. Nair PS et al,[7] conducted a study, according to this study septicemia with 29 cases was the leading cause of fever associated with thrombocytopenia. The second common cause was enteric fever 16, followed by dengue 15, and malaria 10. Srinivas et al,[10] conducted a study, malaria with 41 cases was the leading cause of fever associated with thrombocytopenia. The second common cause was enteric fever followed by septicemia 24, and dengue 19, cases respectively. In our study, we found that the common presenting symptoms were fever, abdominal pain, chills and rigours, followed by myalgia. Rekha et al,[8] conducted a study, according to this study fever was seen in 116(35.4%) patients.

In our study, we found that 10(17%) patients were with bleeding signs and 50(83%) patients were without bleeding signs. Nair et al,[7] conducted a study, according to this out of 109 patients, 45 patients had bleeding manifestation accounting for 41.3%. Srinivas et al,[10] conducted a study, according to this study out of 100 patients, 49 patients had bleeding manifestation accounting for 49%.

In our study, we found that the majority of patients had platelet count above 50,000 cells/mm³ 39(65%), followed by 21,000 to 50,000 cells/mm³, 2(3%) patients were in between 10,000 to 20,000 and only 1(2%) patient was below 10,000. Bhalara et al,[11] conducted a study, according to this study, 196(60%) patients had a platelet count above 50,000 cells/mm³, followed by 77(23%) patients who had a platelet count between 20,000 to 50,000 cells/mm³ and 196(60%) patients had platelet count below 20,000 cells/mm³. Amita A Gandhi et al,[12] conducted a study, according to this study 64(57%) patients had a platelet count above 50,000 cells/mm³, followed by 33(29%) patients who had a platelet count between 20,000 to 50,000 cells/mm³, and 64(57%) patients had platelet count below 20,000 cells/mm³.

In our study, we found that the common bleeding manifestation was melaena in 4(40%) patients, followed by bleeding gums in 3(30%) patients, petechiae was seen in 2(20%) patients and haematuria only in 1(10%) patient. Rekha et al,[8] conducted a study, according to this study, the common bleeding manifestation was melaena in 18(40%), followed by petechiae/purpura/ ecchymosis in 13(28.8%), haematuria 5(11.1%), epistaxis 3(6.7%), gum bleeding 3(6.7%) and hematemesis in 3(6.7%). Dr. Srinivas et al,[10] conducted a study, according to this study purpura(63%) was the commonest bleeding manifestation followed by spontaneous bleeding(37%). Patil et al,[13] conducted a study, according to this study petechiae(73.9%) was the major bleeding manifestation followed by spontaneous bleeding(26.9%). In our study, we found that different categories of drugs were prescribed which highly prescribed drugs were antibiotics, followed by analgesics and antipyretics. NSAIDS and antihistamines are the least prescribed.

CONCLUSION

Infections particularly dengue fever are the commonest cause of fever with thrombocytopenia. The majority of the patients with thrombocytopenia are symptomatic but in a significant number of patients, there were bleeding manifestations also. Melaena was the commonest bleeding manifestation. On treating the specific cause drastic improvement in platelet count was noted. Platelet transfusion was done only if bleeding was present or the platelet count was <10,000 cells/mm³.

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