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ORIGINAL RESEARCH

EVALUATION OF CLINICAL PROFILE OF FEBRILE THROMBOCYTOPENIA

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Abstract

Background: The present study was conducted for evaluating the clinical profile of patients with febrile thrombocytopenia.

Materials & methods: A total of 100 patients with presence of febrile thrombocytopenia were enrolled. Complete demographic and clinical details of all the patients was obtained. Details of clinical history including symptoms of bleeding were recorded. Thorough physical examination for vital signs, general examination, and systemic examination were done and noted. A Performa was framed and all the details were recorded in it. All the results were subjected to statistical analysis using SPSS software.

Results: Chronic fever, headache, myalgia and nausea/vomiting were the most common clinical symptoms found to be present in 95 percent, 76 percent, 76 percent and 72 percent of the patients respectively. Arthralgia, rash and retro-orbital pain were the other features encountered.

Conclusion: Infectious diseases accounts for most of the cases of febrile thrombocytopenia.

Key words: Febrile, Thrombocytopenia, Profile

Introduction

Fever is an elevation of body temperature that exceeds the normal daily variation and occurs in conjunction with an increase in hypothalamic set point. An A.M. temperature of > 37.2 ℃ (>98.9°F) or a P.M. temperature of >37.7 ℃(>99.9°F) would define fever. Thrombocytopenia is defined as a reduction in the peripheral blood platelet count below the lower normal limit of 150000 /mm^3. Despite the number and diversity of disorders that may be associated etiologically, thrombocytopenia results from only four processes: Artifactual thrombocytopenia, deficient platelet production, accelerated platelet destruction and abnormal distribution or pooling of the platelets within the body. It is the most common cause of abnormal bleeding. Thrombocytopenia develops when there is profound disequilibrium in the balance between platelet production, distribution and destruction.[1- 3]

Physicians use fever as a reliable guide to the presence of disease and the response of disease to therapy. It is in the diagnosis of febrile illness that the science and art of medicine come

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together.5 It is well known fact in medicine that one can diagnose a disease only when one is aware of the disease and looks for it. Thrombocytopenia was often missed, because it was not often looked for and the required investigation was not asked for. Now with increasing awareness of the association of thrombocytopenia with various illnesses especially with febrile illness, this entity is now viewed with due regards.[4- 6]Despite the fact that thrombocytopenia is experienced in different illnesses, it is for certain that possibly lethal seeping because of thrombocytopenia is rare. 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.[5, 6]Hence; the present study was conducted for evaluating the clinical profile of patients with febrile thrombocytopenia.

Materials & methods

The present study was conducted for evaluating the clinical profile of patients with febrile thrombocytopenia. A total of 100 patients with presence of febrile thrombocytopenia were enrolled. Complete demographic and clinical details of all the patients was obtained. Details of clinical history including symptoms of bleeding were recorded. Thorough physical examination for vital signs, general examination, and systemic examination were done and noted. The bleeding manifestations on admission or developed during hospital stay were recorded. All patients were subjected to routine laboratory evaluation like Complete blood count, Platelet count, peripheral smear for malarial parasite, Dengue NS1 Ag /Dengue IgM Ab test, Prothrombin time etc. A Performa was framed and all the details were recorded in it. All the results were subjected to statistical analysis using SPSS software.

Results

A total of 100 patients were evaluated. Mean age of the patients was 58.4 years. Majority proportion of the patients were males. Most of the patients belonged to rural residence. As far as aetiology was concerned, viral fever and dengue were the two most common aetiologic agents responsible for 23 percent and 29 percent of the cases respectively. Malaria and septicaemia comprised of 22 percent and 15 percent of the cases.In the present study, chronic fever, headache, myalgia and nausea/vomiting were the most common clinical symptoms found to be present in 95 percent, 76 percent, 76 percent and 72 percent of the patients respectively. Arthralgia, rash and retro-orbital pain were the other features encountered.

Table 1: Aetiology

Aetiology	Number of patients	Percentage
Viral fever	23	23
Dengue	29	29
Malaria	22	22
Septicaemia	15	15
Others	11	11

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Table 2: Clinical profile

Clinical profile	Number of patients	Percentage
Chronic fever	95	95
Myalgia	76	76
Headache	72	72
Nausea/vomiting	76	76
Arthralgia	46	46
Rash	32	32
Retro-orbital pain	23	23

Discussion

Dengue infection is the most common arthropod-borne infection in the tropics where it carries significant morbidity, mortality and immense economic burden to the countries affected. The incidence of dengue infection is on the rise across the globe. Early diagnosis of dengue infection is important in order to minimise mortality. Diagnosis of dengue infection is supported if there is thrombocytopaenia, the presence of which often signify more serious type of dengue infection. All these point to the importance of detecting thrombocytopaenia in suspected dengue patients.It is difficult to differentiate dengue infection from other viral infections due to the overlap in the symptoms. To make the distinction, one may decide to order full blood count (FBC) for all febrile patients.[6- 9]Hence; the present study was conducted for evaluating the clinical profile of patients with febrile thrombocytopenia.

A total of 100 patients were evaluated. Mean age of the patients was 58.4 years. Majority proportion of the patients were males. Most of the patients belonged to rural residence. As far as aetiology was concerned, viral fever and dengue were the two most common aetiologic agents responsible for 23 percent and 29 percent of the cases respectively. Malaria and septicaemia comprised of 22 percent and 15 percent of the cases.In a previous study conducted by Hariprasad S et al, authors analysed the clinical profile of febrile thrombocytopenia.A total of 200 subjects were included in the present study. At the time of diagnosis, complete detailed history of all the patients was taken along with thorough clinical examination. Out of total 200 cases included in the present study, fifty-two cases were due to viral fever while fifty-seven cases were due to malaria. Jaundice and cough was present in 52 and 58 cases respectively. In fifty five percent of the cases, platelet count was between 50000 to 10000 per cubic mm.Infectious diseases accounts for most of the cases of febrile thrombocytopenia.[10]

In the present study, chronic fever, headache, myalgia and nausea/vomiting were the most common clinical symptoms found to be present in 95 percent, 76 percent, 76 percent and 72 percent of the patients respectively. Arthralgia, rash and retro-orbital pain were the other features encountered. In a similar study conducted by Saini KC et al, authors assessed the etiology of fever with thrombocytopenia, the various presentations and complications in our community. Their study included 1217 patients aged more than 14 years with fever and thrombocytopenia admitted in the medical wards. Infection was the commonest cause of thrombocytopenia and dengue was the commonest of the infections followed by malaria. Bleeding manifestations were seen in 42.7% of patients. 91.40% of patients with bleeding

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tendencies had petechiae/purpura as the commonest bleeding manifestation, followed by spontaneous bleeding in 57%. Spontaneous bleeding was noted when platelet counts were less than 20,000. Petechiae/Purpura were seen more commonly when platelet count was in the range of less than or equal to 50,000. Good recovery was noted in 95%, while 5% had mortality. Septicemia accounted for 85.24% of deaths followed by malaria (6.55%) and dengue (5%).Fever with thrombocytopenia is an important clinical condition commonly caused by infections, particularly dengue and malaria.[11]

In another previous study conducted by Agarwal et al, authors evaluated different causes and clinical profile of fever with thrombocytopenia in children aged 1month to 14 year. The highest incidence of thrombocytopenia belonged to the age group 11-14 years (22.5%) followed by 6-9 years (19.5%) and 3-6 years (18%). Incidence of thrombocytopenia was more in male child (58.5%) as compared to female child (41.5%). the most common cause of thrombocytopenia was dengue (50%), Scrub typhus (34%) septicaemia (17.5%) followed by malaria (10.5%). Among the infectious aetiology severe thrombocytopenia was seen more in dengue (25%) and scrub typhus (34.5%) but evidence of bleeding was seen more in sepsis (34.2%) even with higher platelet count which may be explained by associated multi organ failure.Infections like malaria, dengue, leptospirosis and septicaemia were the common causes of thrombocytopenia along with scrub typhus.[12] Hence; further studies are recommended in the future for better exploration of results.

Conclusion

Under the light of above obtained results, the authors conclude that infectious diseases accounts for most of the cases of febrile thrombocytopenia. However; further researches are recommended.

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