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FEBRILE THROMBOCYTOPENIA EXPERIENCED IN GOVERNMENT TERTIARY CARE HOSPITALS

NAGAPPA H. HANDARGAL, M. NARAYANA SWAMY, PRABHU S. & PRIYASHREE

Department of Medicine, Bangalore Medical College and Research Institute, Fort Road, Bangalore, India

ABSTRACT

To evaluate clinical profile of thrombocytopenia and to assess the clinical complications associated with fever and thrombocytopenia. This study was done on patients, who were admitted to Bowring and Lady Curzon hospitals. Prospectively collected a series of 100 patients with fever and thrombocytopenia. Age and sex distribution; In this study male (68%) female(32%). Platelet count and bleeding; Of 100 patients four had bleeding manifestations. There is no correlation between platelet count and bleeding. Degree of thrombocytopenia in various diseases; (1) Viremia; Among infectious cases viremia including dengue accounted for the vast majority(12.0%) . In this study out of 100 cases viremia including dengue accounts for 38 cases. Dengue; In our study dengue caused severe thrombocytopenia. Twenty patients out of 40 cases had count <50,000/mm3 (3) Malaria; In our study malaria caused mild-to-moderate thrombocytopenia with counts remaining between 56000 to 1.5 lacs in most cases. Bleeding manifestations; only five patients presented with bleeding manifestations. Shortest duration of fever is 5.10 days and longest is 13 days. Platelet count started increasing from 2nd day of admission to discharge day of admission with relative treatment. The effective therapeutic management is more essential for early diagnosis and management of the patients.

KEYWORDS: Dengue, Thrombocytopenia, Manifestations, Bleeding

INTRODUCTION

Febrile thrombocytopenia is one of the recognized complication which may be missed if platelet count is not done routinely. Increased awareness and early recognition of thrombocytopenia can avoid catastrophes like fatal bleeding. The causes of febrile thrombocytopenia frequently include Dengue, Malaria, Leptospirosis, Enteric fever, HIV infection. There are 3 mechanisms of decreased platelet count namely decreased production, increased destruction and sequestrations. Thrombocytopenia in febrile episodes occurs due to immune destruction, bone marrow suppression, clumping of platelet, DIC and sometimes hypersplenism.Clinical manifestations of thrombocytopenia commonly include purpura, epistaxis, gingival bleeding. Gastrointestinal bleeding, intracranial bleeding and hematuria are rare complications. Counts less than 10,000 is associated with serious bleeding manifestations like intracranial bleeding. Serial monitoring is said to have prognostic value in febrile thrombocytopenia. The present study aims to study the clinical presentation of febrile thrombocytopenia, study the laboratory profile of patients with febrile thrombocytopenia

METHODS

A cross sectional study conducted at Bowring and Lady Curzon hospitals, BMCRI, Bangalore during 2014 total 100 patients were considered for the study .The data was obtained by the pretested questionnaires . Laboratory parameters of thrombocytopenia were collected on the basis of greater accuracy, the demographic profile and laboratory parameters

viz., platelets counts at base line and different intervals were collected. Epistaxis status, splenomegaly, hepatosplenomegaly and IgG status were recorded at the time of the study. Collected data were analyzed by the SAS -16.50 version. Univariate analysis was employed to test the significant inference

Inclusion Criteria

patients with platelet count less than 1,50,000

patients more than 18 years of age

History of fever for less than 2 weeks. Fever defined as oral A.M. temperature of *>37.2°C (>98.9°F) or a* P.M. temperature *>37.7°C (>99.9°F)*

Exclusion Criteria

Patients less than 18 years of age

Patients with chronic diseases

Patients with drug induced thrombocytopenia

Idiopathic thrombocytopenic purpura

RESULTS

Table 1: Descriptive and Laboratory Investigation Profile of the Patients

SL	Variable	No(%)	Mean±SD	CI-95%	P-Value
1	**Gender** **Male** **Female**	68(68.0%) 32(32.0%)			
2	**Age**	100	29.55±10.36	21.26-31.29	**0.011****
3	**Platelets counts at the time of admission**	100	55616.18±39128	51291-58432	**0.21**
4	**Platelets counts at 3 days**	100	56720.18±33434	52147-5816	**0.32**
5	**Platelets counts at discharge days**	100	1007911±3128	8720-12340	**0.00****
6	**Duration**	100	5.62±0.97	4.21-6.78	**0.02****
7	**Epistaxis** **Yes**	04(4.0%)			**0.56**
8	**Splenomegaly** **Yes**	06(6.0%)			**0.26**
9.	**Hepatosplenomegaly** **Yes**	03(3.0%)			**0.25**
10	**Malaria** **Yes**	01(1.0%)			**0.34**
11	**NIG** **+Ve**	21(21.0%)			**0.00****
12	**IgM** **+Ve**	18(18.0%)			**0.01****
13	**IgG** **+Ve**	12(12.0%)			**0.02****

**, Significant @ 5% level

Age and sex: In our study, male (68.0%) and female comprises (32.0%), the male are affected more than female. the mean age was 29.55 years with duration 5.61 days . mean platelet counts at the time of hospital admission was 55616.18 micro/dL and the reluctant accounted the lower platelets count at the time of discharge of the patients. The duration and platelet counts were statistically significant $p<0.05$. splenomegaly 6.% ,hepatosplenomegaly 3.% malaria 1.0 %. The complications was positively associated with degree of intensity of the fever blanching rashes 1%, bleeding gum 1.% and hemolysis 1% respectively. There is no mortality recorded in our course of study period . Diagnosis test was creeping edge of the therapeutic option and it is accounted for IgG 12%, NIG 21% and IgM was 18 % respectively. Diseases In our study, Dengue is the commonest cause. Lowest platelet count in each disease and its relation to male and female is shown in Table 1.Relation Between Day of Fever and Platelet Count In our study, low platelet count seen on the day of admission, which started raising from Day 3 to 4, and reached to normal value on average of 4 to 7 days of admission (Table 1).Relation of Season (Month of Year) and Number of Cases for Each Disease In our study, maximum number of cases of fever with thrombocytopenia are seen mainly during rainy and early winter season (Table 1).

DISCUSSIONS

Studies indicate that as many as 50% of dengue cases may be misdiagnosed, as a result of inaccurate assessment of the signs and symptoms of disease presentation. This inaccuracy can lead to increased cost of treatment, such as unneeded hospitalizations, as well as possibly increased morbidity and mortality due to volume overload from overzealous use of intravenous fluids. A Belgian study examined predictors of diagnosis in 1962 febrile travellers and expatriates returning from the tropics. After malaria was ruled out, the main predictors of dengue infection included skin rash, thrombocytopenia, and leukopenia. Dengue must be carefully differentiated from preeclampsia during pregnancy. An overlap of symptoms and signs, including thrombocytopenia, impaired liver function, capillary leak, ascites, and decreased urine output may make this clinically challenging. Definitive diagnosis is confirmed via serology. Rare cases of vertical dengue transmission have been reported. If the mother acquires infection in the peripartum period, newborns should be evaluated for dengue with platelet counts and serologic studies.[49, 50] Other problems to be considered in the differential diagnosis of dengue.

CONCLUSIONS

Febrile illness accounts for large number of cases with thrombocytopenia. Incidence is more in males compared to females. Maximum prevalence is in the younger age group, 66% of cases seen in 12-30 years age group. Least prevalence seen in elderly age group, 10%. Fever is the presenting complaint in all 100 cases. Bleeding manifestations were very rarely seen in our study. A Patients who had hematuria had relatively low platelet count, <50,000/mm3. Viremia is the commonest cause of thrombocytopenia in our study including Dengue, 12% of cases and IgM is 18.0%

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