



CLINICAL PROFILE OF ACUTE FEBRILE ILLNESS WITH THROMBOCYTOPENIA IN TERTIARY CARE CENTRE OF ROHILKHAND REGION, UTTAR PRADESH

Medicine

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ABSTRACT

INTRODUCTION- Fever is defined as an elevation of the body temperature above the normal circadian rhythm as a result of the change in the thermoregulatory centre located in the anterior hypothalamus. An AM Temperature of > 98.9 F or a PM temperature of >99.9 f would define fever. The objective of this study was to describe clinic-laboratory profile and outcome of acute febrile illness with thrombocytopenia in a tertiary care centre located in Rohilkhand region of Uttar Pradesh.

MATERIALS AND METHODS- This was an observational prospective study carried out in a tertiary care centre located in Rohilkhand region In Uttar Pradesh Between 1st June 2017 to 31st September 2017. 100 Patients were Included in the study who presented with Fever of Less than a week's duration with thrombocytopenia and were subjected to Investigation and specific treatment.

RESULTS- Total number of patients taken into study were 100 who presented with Fever <1 week and thrombocytopenia , Platelet count <1.5 Lakh who were admitted in Medicine Department at Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly, Uttar Pradesh.

Out of 100 Patients, 52% patients were diagnosed as cases of Dengue, 40% patients of Malaria, 4% patients of leptospirosis and 4% patients of Hepatitis. Most common symptom reported by the patients was fever in patients of Dengue (50.7%), Malaria (55%) and Leptospira (75%), and Headache for patients of Hepatitis. 17.3 % of patients suffering from Dengue reported with a Purpuric rash whereas 22.5% of patients suffering from malaria reported headache.

As far as thrombocytopenia was concerned, 30.7% patients of Dengue had Platelet count in the range of 20001-40000, 26.9 % in the range of 40001-60000, 21.1% in the range of 1-20000, 11.5% in the range of 60001-80000 and 9.8% in the range of 80001-100000.

In Patients of Malaria, 35% of the cases had platelet count in the range of 20001-40000, 25% patients in the range of 60001-80000, 17.5% each in the range of 40001-60000 and 80001-100000, whereas only 5% patients had platelet count between 1-20000.

No death was reported and all patients responded to conservative management.

CONCLUSION- This study will be helpful for the development of rational guidelines for the control of infectious diseases and specific treatment to prevent complications, morbidity and mortality. Dengue fever and Malaria remain the common causes of Acute Febrile Illness with Thrombocytopenia and may become a major mortality Disease with poor outcome

KEYWORDS

INTRODUCTION-

Fever is defined as an elevation of the body temperature above the normal circadian rhythm as a result of the change in the thermoregulatory centre located in the anterior hypothalamus. An AM Temperature of > 98.9 F or a PM temperature of >99.9 f would define fever. Acute Febrile Illness is defined when the temperature is more than 38 C or higher at the time of presentation or there is history of fever that has persisted for 2-7 days.¹

Though thrombocytopenia is encountered in various diseases, it is for sure that potentially fatal bleeding due to thrombocytopenia is rare. The causes of thrombocytopenia are impaired platelet production, accelerated platelet destruction or dilution and/or splenic sequestration. Even though there is no absolute relation between platelet count and bleeding, certain broad generalizations can be made with counts <10,000/uL, bleeding is usual and may be severe.

Thrombocytopenia is characterized by bleeding most often from small vessels. This can manifest as petechiae over skin, hemorrhages from ucosa og gastrointestinal and genitourinary tract. Intracranial hemorrhages is dangerous consequence in thrombocytopenic patients. Thrombocytopenia is defined as platelet count <1.5 lacs. Infections are the commonest cause of thrombocytopenia. Infections like dengue, malaria, typhoid, military TB, HIV, Leptospira, septicemia are some of the common causes of fever with thrombocytopenia.

Hence the need for the study to know the clinical profile and complications of fever with thrombocytopenia.

Fever with thrombocytopenia in the city of Bareilly, during monsoon season rose to epidemic proportions with significant level of morbidity. These fever included dengue, malaria, typhoid, hepatitis, Leptospira.

Pathophysiological Classification of Thrombocytopenia-

- Artfactual thrombocytopenia
- Increased Platelet Destruction- Immunogenic/ Non Immunogenic
- Decreased Platelet Production
- Abnormal Platelet Pooling

AIMS AND OBJECTIVES

To study the clinical presentation and profile of Acute Febrile Illness with thrombocytopenia.

MATERIALS AND METHODS

The Observational Prospective Study was conducted in the Department of Medicine,

Sample Size- Randomly selected 100 patients presenting with fever with thrombocytopenia.

INCLUSION CRITERIA

- Age > 12 Years
- Patients with complaints of fever > 99.9 F and Thrombocytopenia (Platelet <1.5 Lakhs) for 1 week duration

EXCLUSION CRITERIA

- Patients less than 12 years of age
- Patients having afebrile thrombocytopenia
- Congenital Thrombocytopenia
- Fever > 1 week

PROCEDURE-

Approval from the ethical committee was taken. Observational Study was carried out in patients admitted with the Complaints of fever <1week duration and showed Thrombocytopenia , Platelet count <1.5Lakh on Investigations were included in the study.

All patients were subjected to detailed History, General Physical Examination and laboratory investigations.

Complete hemogram, Liver function tests, Kidney function tests, Urine Routine and microscopy, Xray Chest, USG Whole Abdomen, Dengue IgG IgM, MP Antigen, Widal, Leptospira Antigen, Viral Markers, HbsAg, Anti HCV, Blood C/s, Urine C/s were done wherever required. Specific Investigations were done as per supportive Investigations and Clinical findings.

Once the Specific Diagnosis was reached, patients were treated for it specifically and symptomatically.

Platelet transfusion was done when the platelet count <10000 or when the patient had bleeding manifestations.

OBSERVATIONS-

Total number of patients taken into study were 100 who presented with Fever <1 week and thrombocytopenia , Platelet count <1.5 Lakh who were admitted in Medicine Department at Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly, Uttar Pradesh.

Out of 100 Patients, 40 patients were diagnosed as cases of malaria, 52 patients of Dengue, 4 patients of leptospirosis and 4 patients of Hepatitis. Males outnumbered the females in malaria whereas Vice-versa in dengue, but there was equal distribution in patients of Hepatitis and no female was affected with leptospira in our study.

In our Study it was found that in Patient with Fever with Thrombocytopenia 57.5% patient of Malaria were males and 42.5% were Females. Whereas in Patients of Dengue, 48% were males and 52% were females while there were 50% males and 50% females in patients of hepatitis and all were males in Patients suffering from Leptospirosis.

Gender Vs Thrombocytopenia	Etiology			
Sex	Malaria (n=40)	Dengue (n=52)	Hepatitis (n=4)	Leptospirosis (n=4)
Males	57.5%	48%	50.0%	100.0%
Females	42.5%	52%	50.0%	0.0%

Overall, Most common symptom reported by the patients was fever in patients of Dengue (50.7%), Malaria (55%) and Leptospira (75%), and Headache for patients of Hepatitis. 17.3 % of patients suffering from Dengue reported with a rash whereas 22.5% of patients suffering from malaria reported headache. Incidence of Purpuric rash was not found in patients suffering from Malaria, Leptospira and Hepatitis. Pain in Abdomen and loose stools (both 11.5%) was reported in patients of dengue but was more common in patients of malaria(22.5%).

Symptoms of patients with complicated febrile illness	Etiology			
Symptoms	Dengue (n=52)	Malaria (n=40)	Leptospirosis (n=4)	Hepatitis(n=4)
FEVER	50.7%	55%	75.0%	00%
HEADACHE	0.0%	22.5%	25.0%	50%
PAIN ABDOMEN	11.5%	17.5%	0.0%	00%
LOOSE STOOLS	11.5%	05%	0.0%	00%
PURPURIC RASH	17.3%	0.0%	0.0%	0.0%
COUGH	5.2%	00%	0.0%	50.0%
CONSTIPATION	3.8%	0.0%	0.0%	0.0%
Grand Total	100.0%	100.0%	100.0%	100.0%

On Investigations, Thrombocytopenia was documented, 30.7% patients of Dengue had Platelet count in the range of 20001-40000, 26.9 % in the range of 40001-60000, 21.1% in the range of 1-20000, 11.5% in the range of 60001-80000 and 9.8% in the range of 80001-100000.

In Patients of Malaria, 35% of the cases had platelet count in the range of 20001-40000, 25% patients in the range of 60001-80000, 17.5% each in the range of 40001-60000 and 80001-100000, whereas only 5% patients had platelet count between 1-20000.

In patients of leptospira, all cases had Platelet count between 20001-40000.

In cases of Hepatitis, 50% patients had Platelet count between 40001-60000 and 50% had in between 80001-100000.

Platelet Levels	Etiology			
Range	Dengue (n=52)	Malaria (n=40)	Leptospirosis (n=4)	Hepatitis (n=4)
1-20000	21.1%	5.0%	0.0%	0%
20001-40000	30.7%	35.0%	100.0%	0%
40001-60000	26.9%	17.5%	0.0%	50%
60001-80000	11.5%	25.0%	0.0%	0%
80001-100000	9.8%	17.5%	0.0%	50%

7 Patients out of 100 presented with bleeding complications and were managed by platelet transfusions. 9 patients presented with MODS evidenced by deranged Liver and Kidney Function tests and responded well to conservative Management. No death was reported among the participants of the study.

DISCUSSION-

This prospective Observational Study Included 100 Patients of Fever with Thrombocytopenia. Each year the Number of Patients who present with Fever with Thrombocytopenia increase In the monsoon season due to breeding of mosquitoes and problems of waterlogging. The Most Common Cause of Such illnesses are Dengue and Malaria followed by Leptospira and hepatitis. Many patients of Such illnesses develop Organ Dysfunction and land up into serious Complications.

Our Study was consistent with a study by Mittal G et al in North India , majority of the Acute febrile illnesses were males (65.3%). This is probably by the fact that exposure to mosquitoes and transmission of vector borne diseases are more common in males as they are associated with outdoor work.2

In contrast to our observation, an increased incidence of typhoid fever during monsoon season was observed in lakhimpur district of Assam by Sharma et al.3

There were few limitations of our study. Many Potential Pathogens like scrub typhus, spotted fever, chikungunya virus and hanta virus were not tested routinely due to financial constraints. Therefore some cases may be underdiagnosed.

CONCLUSION-

This study will be helpful for the development of rational guidelines for the control of infectious diseases and specific treatment to prevent complications, morbidity and mortality. Dengue fever and Malaria remain the common causes of Acute Febrile Illness with Thrombocytopenia and may become a major mortality Disease with poor outcome. Symptoms like anuria, oliguria, jaundice, altered colour of urine, altered sensorium, rashes and bleeding manifestations are early indicators of impending complications.

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