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A STUDY OF CLINICAL AND LAB PROFILE OF FEVER WITH THROMBOCYTOPENIA

General Medicine

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ABSTRACT

BACKGROUND AND OBJECTIVES: The most common cause of thrombocytopenia is an infection. Fever with thrombocytopenia helps to narrow the differential diagnosis and management of patients in countries like ours where cost effective investigations and management is vital.

METHODS: The method applied involved including in the study 100 patients experiencing thrombocytopenia and fever of age >12 years, the study took place between july 2017 and July 2018.

RESULTS: The commonest infection from the study was malaria while the commonest cause of thrombocytopenia with fever was an infection. Among the candidates studied, 30% of them had bleeding manifestations in form of petichae/purpura and spontaneous bleeding. 90% of patients had good recovery while 10% of patients had mortality. Regarding the deaths, septicaemia with MODS accounted for 84% while rest expired because of hemorrhagic manifestations.

INTERPRETATION AND CONCLUSION: The commonest cause of fever with thrombocytopenia was infectious cause like malaria and dengue.Thrombocytopenia was transient and asymptomatic in the majority of patients.Bleeding manifestations were significant in patients with severe thrombocytopenia when platelets were less than 10000 in the form of spontaneous bleeding and petichia/purpura.Thrombocytoenia recovered spontaneously and within a week on treating the cause in majority of cases.

KEYWORDS

Malaria, mortality, spontaneous bleeding, Petichae/purpura, infection

1.0 INTRODUCTION

The pervasive and ubiquitous theme in science, art and human myth is a fever. Fever is also a common manifestation of illness. Gabrial Daniel Fahrenheit, new interest surfaced in the relationship between body temperature and disease. Modern research had its beginning in 1948 when Dr.Paul Beeson determined that fever is caused by a product of host inflammatory cells. Initially thought to be a product of polymorph nuclear leukocyte, this endogenous pyrogen generated by mononuclear phagocytes. It is identical or very similar in composition to substances previously identified as lymphocyte activating factor (LAF), mononuclear cell factor and leukocyte endogenous mediator collectively known as interleukin – 1 (IL-1). IL-1 has now been shown to have a major role in thermoregulation and fever. Thrombocytopenia is defined as a platelet count<150000/µl. the definition is due to increased sequestration in the spleen, increased destruction, and decreased production. These infections are the commonest cause of thrombocytopenia.

Septicemia: some of the common causes of fever with thrombocytopenia include infections like typhoid, HIV, military TB, malaria leptospirosis, and dengue. A well-organized approach that can shorten the duration of the investigation and bring out the diagnosis is a systematic approach carried out with an awareness of causes of fever with thrombocytopenia. There is, therefore, a need for studying to know the causes and complications of fever with thrombocytopenia.

1.1 OBJECTIVES

- To evaluate the clinical profile of fever with thrombocytopenia
- Identifying the causes of fever with thrombocytopenia
- Assessing the ethical complications associated with fever and thrombocytopenia

1.1.1 Definitions of Febrile Patterns:

The traditional groupings of types of febrile patterns are according to the below-listed definitions. The specific infectious diseases may occur more often in these groups.

- Continuous (sustained): during the 24 hours fever does not fluctuate exceeding (1.5°F) however touches the normal at no time for example falciparum (malignant tertian malaria), typhoid fever central nervous system disorders, rickettsial diseases, Pneumonia and tularemia.
- Intermittent fever: fever is referred to as intermittent fever when it is present for only several hours. The fever is described as Quotidian when a paroxysm of intermittent fever occurs every day. The fever is tertian when on alternate days and quatian1 when two days intervene between consecutive attacks.
- Remittent fever: is a fever with daily variations above 2°C in 24 hours.
- Relapsing fever: is fever involving short febrile periods punctuating several days of abnormal temperatures. They include yellow fever, rat-bite fever, and Hodgkin's disease.
- Saddleback (biphasic fever): it involves several days of experiencing fever with about 1-day gap of reduced fever and several additional days of fever. The common types of this fever include Colorado tick fever, yellow fever and dengue fever.

1.2 Clinical complications OF THROMBOCYTOPENIA:

- The usual asymptomatic and bleeding time are platelet count of >1 lakh
- The mild prolongation of the BT is caused by a platelet count of 50000-100000 with bleeding occurring only after severe trauma.
- After minor trauma, the platelet count of <50000 with easy bruising is manifested by skin purpura.

2.0 INVESTIGATIONS

a. Complete haemogram:

ESR :> 30 mm/hr suggests – TB; malignancy. It is a non-specific test which is raised in most conditions. Leucopenia is in early dengue before the IgM ELISA dengue is positive. Leucocytosis is predominantly neutrophils indicates septicemia. Blood smear – Dohle bodies are toxic granules that suggest septicemia also should be examined for malarial parasites.

b. Rapid spot test :

For Plasmodium vivax and Plasmodium falciparum speciesIt is very sensitive for detection of malaria.

c. WIDAL

Tube method for the identification of enteric fever

d. IgM ELISA dengue

Will be positive after the 5th day of fever and rising titers are indicative of dengue

e. IgM ELISA leptospiral antibodies

In very acute, toxic presentation with conjunctival suffusion with renal and liver parameters being abnormal

f. Blood culture

at least 3 blood culture samples should be taken, special technique are

required, for fastidious organisms to grow and incubation has to be continued for at least 2 weeks.

Bone marrow examination:
Applicable In cases such as of leukemia, lymphoma etc.

3.0 METHODOLOGY

3.1 METHOD OF STUDY:

The method applied involved including in the study 100 patients experiencing thrombocytopenia and fever of age >12 years, the study took place between july 2017 and July 2018.

INCLUSION CRITERIA :

- The patients of both sexes aged > 12 years.
- Patients admitted with fever and found to have thrombocytopenia are included in the study.

EXCLUSION CRITERIA :

- Patients <12 years are excluded
- Patients with fever and no thrombocytopenia are not included.

4.0 RESULTS AND OBSERVATION

The commonest infection from the study was malaria while the commonest cause of thrombocytopenia with fever was an infection. Among the candidates studied, 30% of them had bleeding manifestations in form of petichae/purpura and spontaneous bleeding. 90% of patients had good recovery while 10% of patients had mortality. Regarding the deaths, septicaemia with MODS accounted for 84% while rest expired because of hemorrhagic manifestations.A total number of 100 patients admitted over a period of one and a half years in our hospital were studied.

No particular age group was considered, but the study subjects were in the age group of 18-79 years. The sex of the patient was not taken into consideration in the study. Out of 100 cases of fever with thrombocytopenia, 60% were males and 40% were females. The hospitalization duration varied between 6 and 23 days. The duration of hospitalization averagely was 9 days. Out of 100 patients of fever with thrombocytopenia, all of them had a definitive diagnosis of malaria (45%) as the commonest cause, followed by Enteric fever (22%); septicemia (21%), dengue (10%) and leptospirosis (2%). In malaria, vivax malaria (43%) was commonest followed by falciparum malaria (37%) and mixed malaria (20%).

5.0 CONCLUSION

Among infection, malaria was the commonest cause. The clinical presentation of Malaria; typhoid; dengue, in atypical and occult forms, makes diagnosis difficult and prolonged. There is, therefore, the need for a high index of clinical suspicion. The patients should be investigated with some routine and specific test like rapid spot test; IgM ELISA for dengue, IgM ELISA leptospiral antibodies, etc. for corrects diagnosis. In the majority of patients, thrombocytopenia was transient and asymptomatic. An insignificant number of cases thrombocytopenia lead to various bleeding manifestations and influenced the clinical profile of this febrile illness.

REFERENCES

1. Woodward T.E. “The Fever Pattern as a Diagnostic Aid: In Fever: basic mechanisms and management”. (ed. Mackowiack P.A), New York, Lippincott -Raven Publishers, Philadelphia, 1997: pp215-235.
2. George JN, Aizvi MA. Thrombocytopenia. Chapter-117, In: Williams hematology, 6th Ed, Edt. Ernest Beufler et al, USA: McGraw Hill, 2001 pp1501.
3. Dinerarello C.A., and Wolf M.S. “ Fever of Unkownorignin”, Chapter -40 3rd Edn, Principles and practices of infectious disease, Mandell G.L., Douglas R.G. Jr, Bennett J.E, eds, New York, J. Wiley 1990 : pp468-479.
4. Mackowiak, P.A., Boulant, J.A., “Fever’s upper Limit: In Fever: basic mechanisms and management”. (ed. Mackowiack P.A), New York, Lippincott Raven Publishers, Philadelphia, 1997; pp147-163.
5. Mackowiak, P.A. “History of Clinical Thermometry: In Fever: basic mechanisms and management”. (ed. Mackowiack P.A), New York, Lippincott Raven Publishers, Philadelphia, 1997; pp1-10.
6. Swash, M., “Doctor and patient: In Hutchison’s Clinical Methods”. (ed, Swash, M.) 20thedn, 1995; pp22.