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FREQUENCY OF THROMBOCYTOPENIA IN MALARIAL PATIENTS

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ABSTRACT

OBJECTIVE: *To determine the frequency of Thrombocytopenia in Malarial patients*
STUDY DESIGN: *A cross-sectional study.*
PLACE OF STUDY: *Duration of Study: From July 2008 to June 2009*
METHODOLOGY: *Two hundred forty eight MP positive cases were included in the study. Infections with both Plasmodium falciparum and Plasmodium vivax species were included. Complete blood picture with platelet count was obtained in all patients. Thrombocytopenia was defined as platelets count of < 150,000/cmm.*
RESULTS: *Among 248 patients of MP positive, 200 (80.6%) were found to have thrombocytopenia. Over all 128 patients had Plasmodium falciparum, while 120 patients were having Plasmodium vivax infection. The frequency of thrombocytopenia was 71.87% (n=92) in falciparum and 93.33% (n=112) in vivax infection.*
CONCLUSION: *Thrombocytopenia found to be a common hematological finding in patients with Plasmodium infection particularly marked in vivax species infection.*

KEY WORDS: Thrombocytopenia, Malaria, Plasmodium falciparum. Plasmodium vivax

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INTRODUCTION

Malaria is one of the oldest disease, having far-reaching repercussions on human history. Alexander the Great suffered from malaria during battle of Mesopotamia in the 4th century B.C[1]. Malaria is a vector born disease caused by the bite of the female Anopheles mosquito inoculating the sporozoites in the human blood stream leading to clinical manifestations. Four species of Plasmodium can cause malaria in human beings. These include Plasmodium falciparum, Plasmodium vivax, Plasmodium ovale and Plasmodium malariae. Malaria infects mankind globally. According to World Health Organization assessment, about 40% of the world population is at risk of developing malaria. About 300-500 million people are infected with it. Every year about 2 million people die due to malaria and its complications. The highest mortality is in Africa, mainly in young children.

Pakistan is among the countries those are having a high infectivity rate of malaria. The Directorate of Malaria Control has reported that one person per thousand in the population is infected with malaria. Active malarial transmission happens throughout the year, while aggressive out bursts of disease are seen mainly during and after the 'monsoon' season. Malaria is associated with very high mortality and morbidity. The global burden of any disease is statistically assessed by Disability Adjusted Life Years (DAILYs). Malaria results in the loss of 35,728000, Disability Adjusted Life Years revealing the worldwide impact of this disease. Considering the gravity of the complications of this potentially treatable disease, it is important to diagnose and treat this disease before it is too late. Microscopy remains the Gold standard for the diagnosis of malaria.

Malarial parasite may not be visible on a single slide and multiple slides may be needed. In patients suffering from an acute febrile disease testing negative for malarial parasite, the decision to give empirical antimalarial therapy is always difficult. Most of the time, a delay in initiating antimalarial treatment results in catastrophe. Thrombocytopenia is quite frequently associated with malaria and has been reported by many workers,. As thrombocytopenia is also seen in some other acute febrile illnesses therefore, a significant correlation between malaria and the presence of thrombocytopenia is mandatory before taking it as a hematological parameter of the disease.

Pathophysiology of thrombocytopenia is not very well agreed. Defects in platelet structure and function have been reported as a result of malaria, and in infrequent situations, platelets can be occupied by malarial parasites themselves.