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# Impending Hepatic Failure in Child with Plasmodium Vivax and Hepatitis A: A Rare Co Infection

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Abstract: Malaria is a Vector borne disease transmitted by female anopheles mosquito caused by parasite plasmodium (falciparum - Mc, vivax, malariae and ovale). Hepatitis A is most common cause of infective hepatitis in the world transmitted by faecoral route. Coinfection of hepatitis A and plasmodium vivax is very rare. We are Reporting a case of 6-year-old male child admitted and managed for Co infection of Malaria and Hepatitis A.

Keywords: malaria, hepatitis A, coinfection, plasmodium vivax, mosquito

### 1. Introduction

Malaria continues to be global health problem with the over 40% of the world population in endemic area at risk for malaria [1]. Though Plasmodium falciparum is most common vivax can result in severe malaria and its hepatic complication and its co infection Hepatitis B and C is common and co infection with hepatitis A is very rare [2]. The concominant infection of two diseases may indicate the endemicity of vector and water borne disease and may suggest direct or immunological interaction between two [3].

### 2. Case Report

Six- year old male child was admitted to paediatric department BMC &RC Ballari with fever vomiting and yellowish discoloration of eyes since 7 days. On presentation child was febrile, hemodynamically stable, icterus + pallor +, moderate hepatomegaly with mild splenomegaly. Child was stabilized and Provisionally Diagnosed as Malarial Hepatitis and Treated for the same.

The hematological evaluation revealed moderate anemia (microcytic, hypochromic) with severe Derangement of liver function with positive malaria and HAV IgM. RFT, Coagulation profile were within normal limits. The management included ACT for malaria and supportive management for acute infective hepatitis. After 4-5 days of treatment there were signs of clinical improvement supported by normalization of liver enzymes. The Child was discharged with normal State after 10 days.

### 3. Discussion

Malaria is vector borne disease transmitted by female anopheles mosquito [4]. Hepatitis is viral water borne disease. Among all plasmodium species falciform causes most severe form of malaria. Vivax is also associated with severe malaria with hepatic dysfunction. Malaria affects age group of 6 -12 years predominantly male children. Predominant clinical presentation mimics viral hepatitis including moderate to high grade fever, vomiting and jaundice. Incidence of hepatic dysfunction is 29.5% [5]. The probable cause of hepatic dysfunction is thought to be kufper cell phagocytosis of infected RBCs, stagnation of bile in liver and hypertrophy of hepatocytes [6]. Most studies reported association of malaria with hepatitis B and C. Co infection of hepatitis A with Malaria is very rare and co infection may suggest direct or immunological interaction between two.

Children with complicated Malaria should be started with IV artesunate at 0,12 ,24 hrs followed by oral anti-malarial and for vivax Primaquine was added for radical cure. In case of falciparum injection artesunate followed by oral antimalarial and single dose of Primaquine (0.75mg/kg/dose) was added [7].

## 4. Conclusion

Co infection p.vivax and hepatitis A is very rare may present with severe form of Malaria including hepatic Dysfunction both may present with similar presentation. Child was improved dramatically with antimalarial therapy with the subsequent normal liver function test.

We recommend that we should be suspicious of similar co infection in children presenting with acute severe hepatic dysfunction with splenomegaly and anemia to evaluate the co infection with malaria and hepatitis A interchangeable.

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