Unusual presentation of Falciparm Malaria,Case Report

# Hyperbilirubinaemia in a patients with complicated Falciparum Malaria

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## Abstract:

This is a case report of a 32- year oldmale patient presented to Author clinic, confused with deep jaundice , looked toxic , clinically looked as acute fulminant hepatitis,( jaundice with flapping and not oriented to time),investigations showed typical cholestatic jaundice , malaria investigation was requested and it was positive for Falciparum malaria.The patient was treated according to the national policy of malaria control programs , by quinine infusion , dramatic response and improvement within 5 days .

**Key words :** Falciparum malaria , Conjugated Bilirubinemia , hepatic failure.

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## ملخص الحالة:

هذا تقرير لحالة طبية لذكر يبلغ من العمر 32 سنة , يشكو من اصفرار شديد وعدم تركيز, خلال أسبوع فقط , إكلينيكيا من الوهلة الأولى التهاب كبدي حاد , مخبريا الفحوصات تشير إلى وجود يرقان ركودي , لكن لوجود حالات مشابهة تم طلب فحص للملا ريا في الحال وكانت النتيجة موجبة , تم الاستجابة للعلاج بالكينين , ( الوريدي (بناء على السياسة الوطنية لعلاج الملاريا وتماثل للشفاء سريعا خلال 5 أيام واخرج من المستشفى

## الخلاصة:

أي مريض يعاني من يرقان حاد بغض النظر عن شدة اليرقان ونوعه وبعد عمل فحص الفيروسات , والأخذ بعين الاعتبار منطقة المريض و حالة ترحالة في الفترة الأخيرة , يجب اخذ الحيطة في ان تكون الملا ريا هي السبب الرئيسي لحالة المريض ،وبذا نتجنب معاناة المريض وممكن فقدانه

## Background :

Malaria is a protozoan disease transmitted by the bite of infected Anophelesmosquitoes .About 3.2 billion people – almost half of the world's population – are at risk of malaria. Young children, pregnant women and non-immune travellers from malaria-free areas are particularly vulnerable to the disease when they become infected. Malaria is preventable and curable, and increased efforts are dramatically reducing the malaria burden in many places.

Between 2000 and 2015, malaria incidence (the rate of new cases) fell by 37% globally. In that same period, malaria death rates fell by 60% globally among all age groups, and by 65% among children under 5. Sub-Saharan Africa carries a disproportionately high share of the global malaria burden. In 2015, the region was home to 89% of malaria cases and 91% of malaria deaths[2]. Malaria has been eliminated from North America , Europe and Russia but despite enormous control efforts still in many parts of the tropics with increasing resistance of the parasite and insecticide resistance of the vector. Malaria remains today , as it has been for non-endemic countries , and a danger to travelers [1] .

Plasmodium falciparum infection is the most dangerous type of malaria that causing complications, fever has no particular pattern , with headache cough , vomiting and may have diarrhea [3].

Jaundice is common due to hemolysis and hepatic dysfunction , liver and spleen enlarge and tender , anemia develops as does thrombocytopenia . patient may rapidly develop serious complications as cerebral malaria ( confusion , seizures & coma) , acute renal failure , hyperpyrexia and shock [4].

Malaria is complex but it is a curable and preventable disease. Lives can be saved if the disease is detected early and adequately treated. It is known what action is necessary to prevent the disease and to avoid or contain epidemics and other critical situations. The technology to prevent, monitor, diagnose and treat malaria exists. It needs to be adapted to local conditions and to be applied through local and national malaria control programs[2].

## Case report:

On December 2013, A 32-year-old Yamani man from LebnatBrshaid(70 Kilometer from Mukalla) was presented to Author clinic confused after 5 days of mild fever , deep jaundice, constipation anddark urine.

The clinical findings were as follows: body temperature 37.8 °C, blood pressure 160/90 mmHg, heart rate 110 beats/min and respiratory rate 30 breaths/min. The patient's physical examination was normal except for epigastric tenderness , tense abdomen in both upper quadrant , liver and spleen was not palpable due to abdominal spasm.

Laboratory tests revealed 3300 × 10 9 /L white blood cell count(WBC), 13.2mg/dl hemoglobin(Hb), 96200 Platelet count, creatinine 1.8 mg/dl, total bilirubin 13.2mg/dl , conjugated 11.4mg/dl , aspartate aminotransferase (AST) 788 , alanine aminotransferase( ALT) 680, alkaline phosphates 640 U/L , and glucose 88mg/dl.

The patient'serologic tests for hepatitis B virus surface antigen (HbsAg), hepatitis C virus antibodies ( HCV Ab) and human immune virus ( HIV ) were negative . Malaria Plasmodium Species( MPS) by thick & thin film done in IbinSinna Teaching Hospital( Mukalla ) was positive for falciparum type (Fig. 1).

Blood film showed normochromic normocytic cells , no abnormal or fragmented red blood cells (RBCs ) , other serological test was not done (unavailable).

A Abdominal Ultra-sound revealed a mildly enlarged spleen, no ascites normal liver size and texture.

The Patient was admitted to IbinSinna Hospital and treated with intravenous quinine infusion (10mg/Kg ,diluted in 500 ml dextrose saline with 40% glucoseevery eight hourly for 4days) and changed to oral Artescope for other three days. After 2days of treatment, the patient's MPS were negative . On the basis of his clinical and Para clinical improvement, the patient was discharged withbilirubin 2.4mg/dl , s.creatinine 1.1mg/dl ,AST 58 U/L,ALT 64U/L MPS negative .

## Discussion:

Although unconjugatedhyperbilirubinemia is common in malaria, hepatocellular jaundice or the so-called 'malarial hepatitis' has been reported incidence of approximately 2.6%from North-East India[5]. Murthy et al. have reported malarial hepatitis in 22% cases of falciparum malaria from Hyderabad. Harris et al. found that 72% of patients with jaundice had direct hyperbilirubinemia and elevated liver enzymes suggesting hepatocellular damage. Higher incidence of hepatitis reported by some authors may be due to inclusion of only admitted cases, of which 50% had cerebral malaria and other complications that indicate severe infection. While hepatomegaly and mild elevation of enzymes can be observed in a significant proportion of patients, involvement of liver leading to acute hepatitis or liver cell necrosis is a relatively uncommon complication in P. falciparum malaria [5]. Hepatocellular dysfunction ranging from conjugated hyperbilirubinemia with or without mild elevation in transaminases to fulminant hepatic failure has been described in falciparum malaria.[5]

A diagnosis of malarial hepatitis can be made in a patient who fulfills the following criteria: (i) demonstration of P. falciparum infection; (ii) at least threefold rise in transaminases, particularly alanine aminotransferase (ALT), demonstrated on two consecutive blood samples taken over 24 h apart with or without conjugated hyperbilirubinemia; (iii) absence of clinical and serological evidence to suggest drug or viral hepatitis; and finally (iv) clinical response to antimalarial drugs or autopsy evidence of disseminated falciparum infection [5].

In Mukalla we havesome cases of malaria in thelast two years 13-15 cases/year (2011-2013) in comparison to the previousyear's56cases/year in (2008-2010) this is due to nearly eradication plan (6).

Secondly cases have been seen in IbinSinaa Hospital 2008-20010as complicated Malaria hemolytic anemia ( pre-hepatic cause ) &intracanaliculy type ( hepatic) or as typical presentation of malaria , But unlikely to see as purely obstructive type ( cholestatic) [6].

So complicated Malaria in addition to be presented , as cerebral Malaria , hepatic failure ,Hepatocellular damage , hemolyticanemia , acute renal failure it can be presented dominantly as cholestatic jaundice . So any delay for diagnosiscauses missing of many cases.

In India nine cases with jaundice and renal failure were referred as acute renal failure only one of them was diagnosed as malaria at time of referral [7].

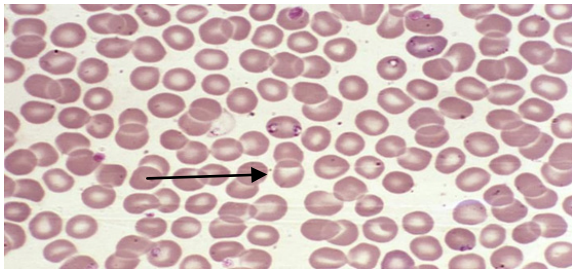
In the other hand not to forget other important diseases that cause cholestatic jaundice such as : Intrahepatic ( primary biliary cirrhosis , alcohol , some drugs , pregnancy ) or extrahepatic (carcinoma – pancreatic – ampullary – liver metastatic ) .

## Conclusion:

Those patient presented to outpatient or hospital ,

jaundiced with fever of any pattern especially those with negative acute viral study ( fever , jaundice , increase liver enzymes ) , malaria should be investigated carefully and repeatedly using thick and thin films in addition to serological tests with more caution to travelers or those who have comefrom endemic areas , so as not to miss diagnosis which may lead topatient harm and death.

**Figure ( 1) a blood film with the ring form of Plasmodium falciparum Malaria .**



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