INTRODUCTION

Malaria is hyper endemic and a major health problem in Pakistan. Epidemics of malaria have occurred periodically in Pakistan, major ones being in Punjab in 1975 and in N.W.F.P. in 1989 - 90. Plasmodium (P.) vivax and P. falciparum are the most prevalent species responsible for malaria in Pakistan.1 Malaria transmission in Pakistan is markedly seasonal and mostly occurs after July-August monsoon.2 Pregnant women and children under 5 years of age are highly vulnerable group of malaria.

Congenital Malaria (CM) is the presence of malarial parasites in the blood of newborns. The disease is acquired from mother either during pregnancy or perinatally at the time of birth. The most common clinical features in 80% cases of CM are fever, anaemia and splenomegaly. Other features include hepatosplenomegaly, jaundice, regurgitation, loose stools, and poor feeding.3 Occasionally, restlessness and cyanosis can also be seen. Symptoms usually occur during 10 - 30 days of age, but can be seen in a day-old baby or be delayed for weeks or month.4

A case of congenital malaria is reported in a 6-week male infant who presented with pallor, jaundice and massive spleen. Laboratory tests revealed anaemia, thrombocytopenia and bilirubinemia. Peripheral smear examination revealed parasitaemia. Points favoring transplacental transmission are first born child, the presence of relatively high parasite count, gametocytemia and massive spleen. Peripheral smear examination should be done in all hospitalized patients. Prevention of malaria should be considered in all pregnant patients.

CASE REPORT

A 6-week male baby weighing 4.6 kg was admitted in Children’s Hospital, Lahore, with history of poor feeding of 20 days duration. On general physical examination, the baby appeared pale and icteric; his abdomen was soft without any distension and the spleen was 8 cm below the costal margin (massive enlargement). Liver span was 2 cm below the costal margin. There was no ascites and other systems were normal. In order of priority, clinical diagnosis of jaundice with anemia and hepatosplenomegaly (secondary to infections, probably viral) / hemolysis / congestion / storage disorders was considered. His mother was a 28 years woman. This baby was her first child, delivered after full term at some private clinic. A directed history of mother revealed ill health and fever in the last weeks of her pregnancy; however, presently she did not have fever or parasitemia.

Malarial antibody test was positive in mother’s blood sample. Laboratory evaluation revealed anaemia (Hb 7.3 g/dL), Hct 22.5%, red cell count 2.50 x 10⁶/µl, MCV 89.0 fl, MCH 30.0 Pg, and MCHC of 31.0 g/dL with normal total white cell count (5.9 x 10³ µL. N 41%, L 55%, M 04%) along with reduced platelet count (35 x 10³ /µL). ESR (135 mm after 1st hour) and CRP level (7 mg/dl) was raised.

Total bilirubin was 7.5 mg/dl (direct 2.5 mg/dL, indirect 5.0 mg/dL), ALT was 55 U/L (< 56) and AST 75 U/L (< 82). LDH was mildly raised (350 U/L, normal = 110 - 295). Other tests, which include random blood sugar level, serum electrolytes and RFT’S (blood urea and serum creatinine), were within normal range. X-ray of chest was normal. Abdominal ultrasonography revealed hepatosplenomegaly. Complete urine examination was normal. Blood and urine cultures were negative.

Peripheral smear showed normocytic normochromic RBC’s along with polychromasia. WBC’s were normal in

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ABSTRACT

Congenital malaria is the presence of malarial parasites in the blood of newborns. The disease is acquired from mother either during pregnancy or perinatally at the time of birth. Congenital malaria in an endemic area can present without an obvious history of fever and parasitaemia in both mother and her infant. A case of Plasmodium vivax malaria in a 6-week infant is documented. Infant presented with pallor, jaundice and massive spleen. Laboratory tests revealed anaemia, thrombocytopenia and bilirubinemia. Peripheral smear examination revealed parasitaemia. Points favoring transplacental transmission are first born child, the presence of relatively high parasite count, gametocytemia and massive spleen. Peripheral smear examination should be done in all hospitalized patients. Prevention of malaria should be considered in all pregnant patients.

Key Words: Congenital malaria. Plasmodium vivax. Splenomegaly.
morphology with unremarkable differential count. Normal morphology platelets were seen and thrombocytopenia was confirmed on smear. Reticulocyte count was 4%. There was infestation of the peripheral blood with malarial parasites.

Thick and thin smears were made to estimate parasite load and better visualization of undistorted parasites. There were 5% parasitized red cells. Malarial parasites at trophozoite, schizont and gametocyte stages of development were seen on thin smear. The presence of Schuffner's dots (P. vivax) surrounding the parasites were also remarkable.

Considering the severity and multidrug resistance of malarial infection, the baby was given DHP sachet, [Dihydroartemisinin: 15 mg, Piperaquine Phosphate: 120 mg], once a day + syrup artem (Artemether-lumefantrine) 1.5 ml/kg/day for three consecutive days. He was also transfused during his stay for correction of anaemia. The baby showed remarkable recovery. His jaundice subsided, spleen size was much reduced and the baby started taking feeds. Peripheral smear was repeated after therapy and was negative for malarial parasites on two consecutive days. The baby was discharged and followed up in outpatient department.

**DISCUSSION**

Congenital malaria was first described in 1876. The incidence of congenital / neonatal malaria is now rising, possibly due to the increased resistance and virulence of the parasite resulting from altered antigenic determinants as well as increased reporting. Malaria in neonates is uncommon, but it may result in serious morbidity when not promptly diagnosed. A study conducted in infants at Karachi showed the prevalence of congenital malaria as 4.45% and acquired malaria as 14%. According to another report from Children’s Hospital, Lahore, in neonates, 75% of cases had congenital malaria, 13% transfusional malaria and 12% acquired malaria.

There is a history of fever in the mother of index case in the last weeks of her pregnancy. Cases of congenital malaria may occur in the absence of clinical symptoms in mothers. People living in endemic areas develop high level of immunity. Thus, the pregnant patients of these endemic areas may not manifest the symptoms of infection.

Majority of infections in pregnant patients are with *P. vivax* species, and most of them are asymptomatic. A study conducted by Poespoprodjo *et al.* revealed that only 24% of women infected with *P. vivax* presented with symptoms, compared with 42% of women with *P. falciparum* infection who presented with symptoms.

In the present case, severe manifestations of malarial infection were seen in a 6-week infant. There was a delay in diagnosis due to non-specific presentation, but the presence of massive spleen favors the acquisition of the disease *in utero* in this case. Absence of fever in the infant was explained by transplacentally acquired maternal antibodies (IgG), which confer transient protection to the infant.

**REFERENCES**