
Case Report

CONGENITAL MALARIA IN A NEONATE

Ahmad Hashemzadeh MD*, Farhad Heydarian MD

We report on a newborn at Ghaem Hospital, Mashhad who was diagnosed with congenital malaria. This baby was admitted for evaluation of a fever and cough, which began one day prior to admission. The newborn was pale with splenomegaly and normal neonatal reflexes.

Medical laboratory tests, including a peripheral blood smear, revealed *Plasmodium vivax* in red blood cells. His mother had been suffering from a fever for almost a week prior to delivery. She was tested and found positive for *P. vivax*.

Both the newborn and mother were successfully treated with chloroquine. They were discharged from the hospital in good condition with negative blood smears.

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Introduction

Congenital malaria is a rare disease.¹ So far, 300 cases are reported in literature.² There are some arguments about the definition of congenital malaria. Normally, symptoms occur 10 to 30 days postpartum.³ However, the disease can be seen in a day-old baby or be delayed for weeks or months. The most common clinical features in 80% of cases are fever, anemia, and splenomegaly.⁴ Other signs and symptoms include hepatomegaly, jaundice, regurgitation, loose stools, and poor feeding. Occasionally, drowsiness, restlessness, and cyanosis can also be seen.^{3,4}

Case Report

A 21-day-old male neonate was admitted to pediatric ward for the evaluation of a fever and cough. The onset of fever was 24 hours prior to hospitalization. No history of diarrhea, vomiting, or poor feeding was reported.

His mother was an 18-year-old Afghani woman who had immigrated to Iran 3 years before. She

was a primigravida who had had a normal vaginal delivery.

At birth, the baby had a weight of 3600 g and an Apgar score of 8 and 9. On physical examination, he had a body temperature of 38.5°C, pulse rate of 130/min, respiratory rate of 32/min, blood pressure of 80/50 mmHg, weight of 4300 g, length of 53 cm, and a head circumference of 38 cm. The anterior fontanel was 2 × 2 cm and the posterior was 1 × 1 cm.

The patient appeared pale. His sclera was normal. Heart and lung examinations were normal. His abdomen was soft without any distension. His spleen was palpable 2 cm below the left costal margin. Liver span was normal.

Laboratory data included blood sugar, creatinine, serum sodium, and potassium, all of which were within normal range. Other laboratory findings included an ESR of 128, CRP 3+, CBC 9400, S 16%, L 70%, M 14%, Hb 9.3 g/dL, Hct 28.6%, and plt 50,000 mm³. Urine and its culture as well as chest X-ray were normal.

On peripheral blood smear, *Plasmodium vivax* was detected, although blood cultures were negative. The blood smear taken from his mother was positive for *P. vivax* as well (Figure 1).

Discussion

The incubation period for malaria varies from 8

Authors' affiliation: Department of Pediatrics, Mashhad University of Medical Sciences, Mashhad, Iran.

•Corresponding author and reprints: Ahmad Hashemzadeh MD, Department of Pediatrics, Ghaem Hospital, Mashhad University of Medical Sciences, Mashhad, Iran.
Fax: +98-511- 8417451

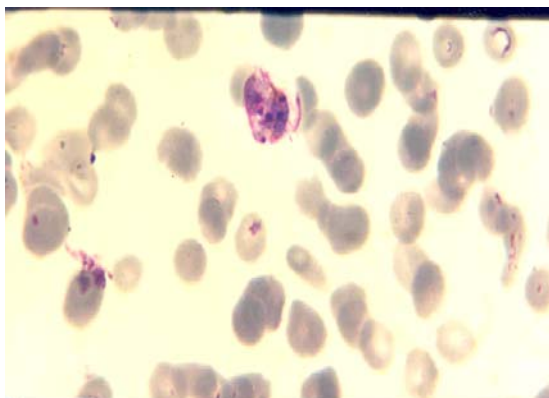


Figure 1. *P. vivax* in the peripheral blood smear.

days to months or even longer.⁵ Transplacental infection of the neonate, or congenital malaria, is rare. Endemic areas in Asia are Afghanistan, Iraq, India, Bangladesh, Cambodia, and scattered non-urbanized areas of Iran (southeastern region).⁶

In most cases, the mother has been infected with the parasite during pregnancy.⁴ Malaria infection is more frequent and serious during the first pregnancy, as is the occurrence of congenital malaria.^{7, 8} There have been some reports of mothers with malaria who have lived in endemic areas for years without any symptoms and became symptomatic after living in a malaria-free area. This indicates that the onset of infection might be prior to migration to malaria-free areas.

The most common findings in congenital malaria, as seen in our case, are fever, anemia, and splenomegaly. Respiratory distress, loose stools, and hepatomegaly can be seen as well.⁹ In a case report from Italy, a 19-day-old newborn of a Zairian immigrant who suffered from congenital malaria, had a fever of 38.7°C, anemia, hepatosplenomegaly, elevated ESR, and mild thrombocytopenia. The peripheral blood smear of her mother, who had had a fever a week before labor, was positive for *P. vivax*. The patient was successfully treated with quinine.¹⁰ In another report from the United States, a 5-week-old infant immigrated from Liberia was admitted with a fever of 38.2°C, mild icterus, hepatosplenomegaly, and anemia. Peripheral thin blood smear showed *P. falciparum*. His mother had suffered more than 15 prior episodes of malaria. Quinine was started and the patient had no parasitemia after 4 days of treatment.²

The major diagnostic criteria is to find *P. vivax* in blood smears—in the thick and thin films. The thick film of peripheral blood may be more helpful

to detect the parasite.¹¹ At birth, 29% of newborns who suffer from congenital malaria have parasitemia.¹² Between 1% and 4% of pregnant women with overt malaria attacks have babies with congenital malaria.

In our case, the newborn was successfully treated with chloroquine. As mentioned earlier, his mother had lived in Afghanistan for many years. The mother had moved to Iran 3 years prior to the delivery and was symptom-free until a week prior to the delivery. This, therefore, indicates that malaria could stay dormant for years.

The drug of choice for treatment of malaria during pregnancy is chloroquine.¹³ The mother was treated with chloroquine and was given prophylaxis with primaquine. Both mother and child had negative blood smears at the time of discharge. Recovery was complete for both the newborn and mother.

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