

**Mixed Infection with
Plasmodium vivax and
Salmonella typhi in an Infant**

Malaria and typhoid fever occur infrequently in infants less than 6 months of age. Still uncommon is the simultaneous occurrence of both these infections in young infants. We report a case who had mixed infection with *Plasmodium vivax* and *Salmonella typhi*. A four-month-old boy was admitted with high grade fever of 10 days' duration. There was no history of cough, refusal to feed, vomiting, diarrhea, or difficulty micturition. He was exclusively breastfed. On examination, he was irritable and febrile (axillary temperature 103°C). Liver and spleen were soft, nontender, and measured 3.0 cm and 3.5 cm below costal margin, respectively. Other systems were normal. Investigations revealed a leucocyte count of 12000/cu mm with 40% neutrophils and 60% lymphocytes, Hb 9.0 g/dl, and ESR 46 mm/hour. Examination of urine and CSF revealed no abnormality. Chest X-ray was normal and widal test was negative. Peripheral smear demonstrated *P. vivax*. The child was given a course of chloroquine but he continued to have high grade fever. The repeat smear was negative for malarial parasite. This led us to think of other coexisting condition

with similar clinical presentation. Urine and CSF cultures were sterile. Blood culture grew multidrug resistant *S. typhi*. The child was given ceftriaxone (100 mg/kg/day) for 14 days. The fever started decreasing on 4th day of therapy and disappeared on 7th day.

Failure of fever to subside in malaria following chloroquine administration generally implies drug resistance. This is not always true. In areas with high prevalence of malaria and typhoid fever, the possibility of mixed infection should be kept in mind if the entire clinical picture can not be explained by malaria alone. This will save the infant from undue delay in diagnosis. Inability to find malarial parasite on repeat smear examination provides a clue for such a possibility. The infrequent occurrence of malaria in young infants is related to the transplacental transfer of specific IgG malarial antibodies from mother to fetus, high Hb F, and their milk based diet which inhibits the growth of parasite due to its low para-aminobenzoic acid content(1). Malaria can predispose to bacterial superinfection including *Salmonella* infections(2).

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Present Status of Hemoglobinopathies in India

The recent editorial(1) on this subject was very informative but the table showing the distribution of abnormal hemoglobins in India has left out Karnataka completely. I can not give an exact figure in this context as I don't think a survey of the disease has been conducted but we do have a large number of cases of β -thalassemia major as well as sickle cell anemia in Karnataka. The Billigiri Ranga Hills in the Malnad area of Karnataka is one of the pockets of sickle cell anemia.

In St John's Medical College Hospital we are following about 20 cases of β -thalassemia major and about 10 cases of sickle cell anemia and every year about 3-5 new cases are added on. The other hospitals in Bangalore and other major cities in Karnataka must be having a similar number of cases.

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Propranolol in Supraventricular Tachycardia

With reference to the article on the "Management of Supraventricular Tachycardia (SVT) in Infancy and Childhood"(1), we would like to add other pharmacotherapy used for SVT by

presenting our experience of treating a newborn with SVT who required propranolol in addition to cardioversion and digoxin.

A 10 day old baby boy was admitted with a history of poor feeding, lethargy, rapid respiration and grunting since age of 5 days. It was a full term infant born to a primigravida mother by spontaneous vaginal delivery. His birth weight