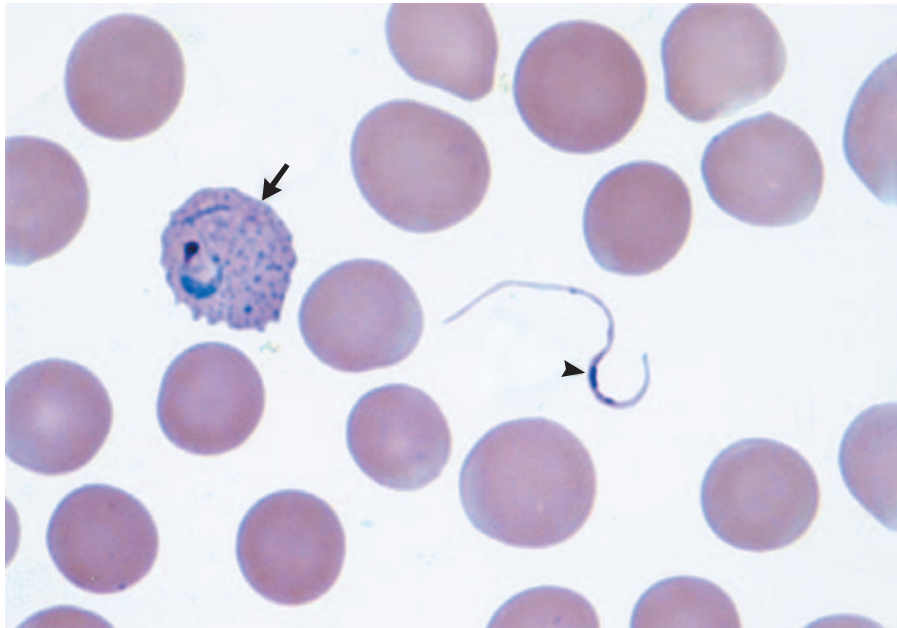


IMAGES IN CLINICAL MEDICINE

Plasmodium vivax Microgametes

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A 31-YEAR-OLD WOMAN, 33 WEEKS PREGNANT, PRESENTED WITH A FEVER (40°C) and chills 2 months after returning from a trip to Brazil. A mixed infection of *Plasmodium malariae* and *P. falciparum* was diagnosed and treated with quinine. She had a relapse one month after the diagnosis, and labor was induced because of fetal distress. A review of both sets of smears led to a revised diagnosis of *P. vivax*, confirmed by polymerase-chain-reaction testing. In the current smear, a ring form is seen within a red cell with basophilic stippling, or what are known as Schüffner's dots (arrow), and also several serpentine forms, which were identified as *P. vivax* microgametes (arrowhead). Because parasites were seen in cord blood obtained at delivery, both mother and infant were treated with chloroquine. Subsequently, the mother was treated with primaquine for terminal prophylaxis, which the infant did not require since he was not exposed to the sporozoite and thus would not have had the dormant hepatic hypnozoite. One year later, both mother and child are doing well, with no further relapses.

Malaria male microgametes are produced from the gametocytes by exflagellation, which takes place in the mosquito immediately after the blood meal. Exflagellation is induced by a temperature decrease and by an increase in pH, which occur on passage from the human bloodstream to the mosquito digestive tract. Microgametes are rarely seen in human blood and seem to be produced in vitro when laboratory conditions favor exflagellation during the preparation of blood smears; familiarity with their appearance may prevent diagnostic confusion with organisms such as trypanosomes and spirochetes.

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