

A Case of Falciiparum Malaria in Pregnancy

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- Malaria infection in pregnancy can cause significant maternal and foetal morbidity and mortality.
- Pregnancy is considered as high-risk category for malarial infection.
- 75% of cases are caused by plasmodium falciparum and mortality rate approximately 0.5–1.0%.
- Types- severe and complicated malaria(2% or more parasitised red blood cells), uncomplicated malaria(fewer than 2% parasitised red blood cells), congenital malaria
- Respiratory distress ,pulmonary oedema, hypoglycaemia and algid malaria(gram negative septicaemia)are commonly seen in pregnant women with severe malaria.
- Death due to severe malaria can occur within hours of presentation, so prompt assessment and initiation of antimalarial therapy is essential.

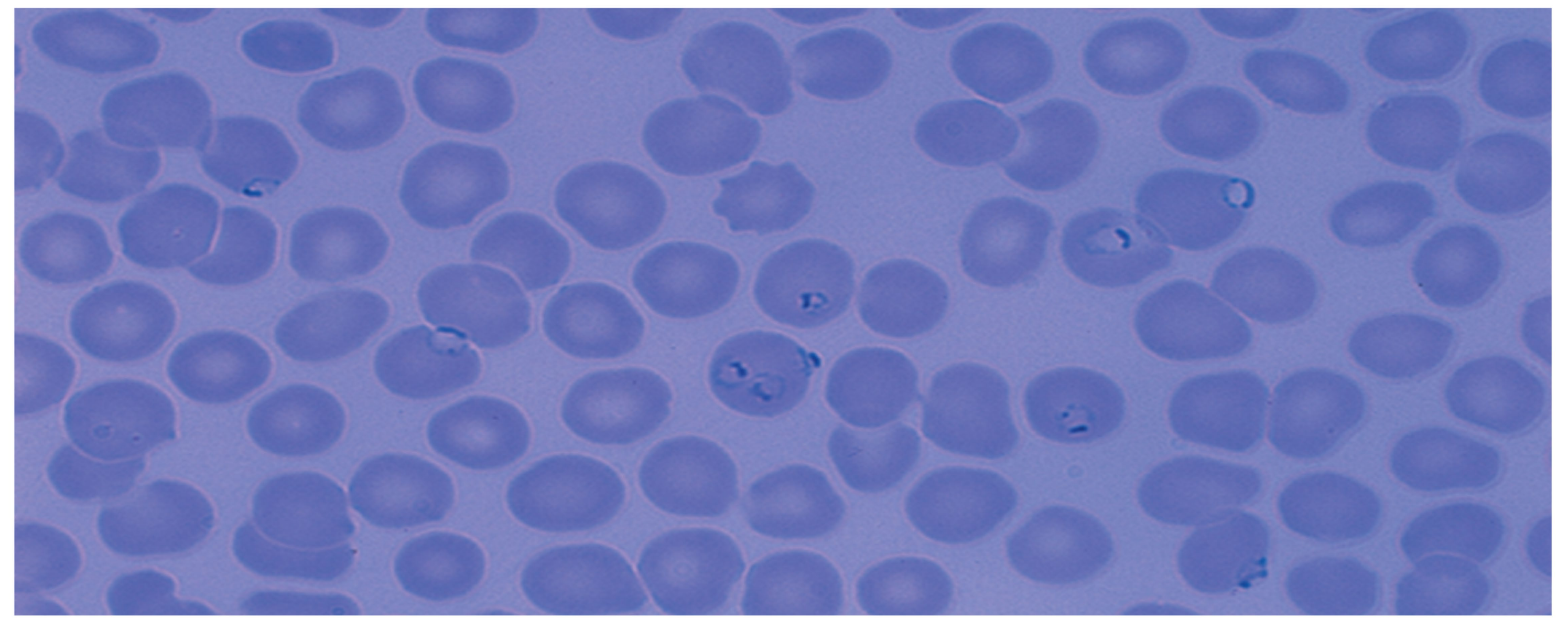
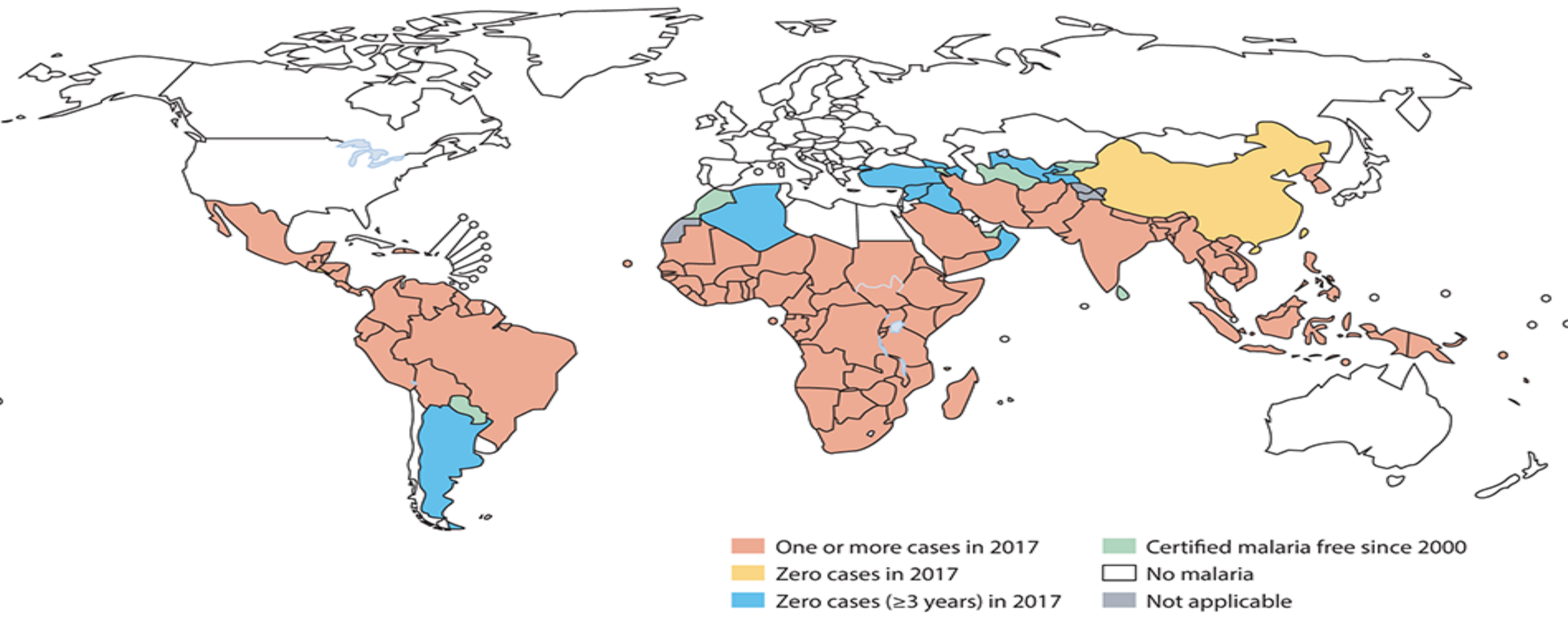
Case Report

- 30-year-old P2, an African national booked in our hospital at 20 weeks gestation.
- She had history of vaginal deliveries and has no significant past medical history.
- Attended urgent care at 34 weeks gestation with two days history of high-grade fever associated with chills.
- No respiratory, urinary, or gastrointestinal symptoms.
- No history of abdominal pain, vaginal discharge or bleeding and foetal movements were good.
- Travel History- She has travelled to her home country and was back 10 days ago.
- On examination, temperature 39.3, Pulse rate-99, Blood pressure-95/55, Respiratory rate -20, Oxygen saturation- 100.
- Uterus was corresponding to 34 weeks and foetal wellbeing was reassuring.
- Her blood investigations showed malaria -Plasmodium Falciparum positive in blood film.
- Complete blood count ,liver and renal functions were normal.
- She was treated with Intravenous Artesunate for four days followed by Quinine 648 mg orally for 3 days.
- She recovered well after initiating antimalarial therapy.

Discussion

- Malaria should be suspected in patients with febrile illness who have had exposure to a region where malaria is endemic.
- The initial symptoms are nonspecific. Approximately 75% of cases of malaria infection in pregnancy are caused by Plasmodium falciparum.
- Plasmodium falciparum can cause high levels of parasitaemia, placental sequestration and adverse foetal and maternal outcomes.
- The hallmark of falciparum malaria in pregnancy is parasites sequestered in the placenta which evade host defence mechanisms - risk of recurrence
- Compared with nonpregnant women, pregnant women experience more severe disease, including more hypoglycaemia, pulmonary oedema ,severe anaemia and secondary bacterial infections .Other complications include Thrombocytopenia, preterm labour, foetal growth restriction, foetal heart rate abnormalities and congenital malaria.
- History of malaria in pregnancy- neonate should be screened for malaria
- Prompt and effective antimalarial treatment to prevent complications
- Uncomplicated malaria in pregnancy is not an indication for induction of labour
- If peripartum malaria- placental histology and placental ,cord and baby blood films to detect congenital malaria
- Vertical transmission can occur especially if infection at the time of birth and the placenta and cord blood film positive for malaria

Countries with indigenous cases in 2000 and their status by 2017 Countries with zero indigenous cases over at least the past 3 consecutive years are considered to be malaria free. All countries in the WHO European Region reported zero indigenous cases in 2016 and again in 2017. In 2017, both China and El Salvador reportes zero indigenous cases. Source: WHO database.



Plasmodium falciparumThin Film.Ring forms (trophozoites) ofP falciparumare seen on the Wright stain thin film

Investigations & Treatment

1. Microscopic examination of blood films
2. Rapid diagnostic tests

In a febrile patient, three negative malaria smears 12–24 hours apart rules out the diagnosis of malaria.

Treatment

Treat malaria in pregnancy as an emergency

Intravenous artesunate is the treatment of choice for severe falciparum malaria. Intravenous quinine can be used if artesunate is not available. Primaquine should not be used in pregnancy.

Use quinine and clindamycin to treat uncomplicated P. falciparum or mixed infection

Use chloroquine to treat P. vivax, P. ovale or P. malariae.

Seek advice from infectious diseases specialist, especially for severe and recurrent cases

Prevention

Updated WHO recommendations for malaria chemoprevention among children and pregnant women3 June 2022_ intermittent preventive treatment of malaria in pregnancy (IPTp), when given to the pregnant women who are most vulnerable to malaria, has been shown to be a safe and cost-effective strategy for reducing the disease burden and saving lives.

IPTp with SP sulfadoxine-pyrimethamine is a safe and cost-effective strategy

Selecting antimalarials for pregnant travellers-1.Chloroquine sensitive destinations-Chloroquine is safe in pregnancy and is the drug of choice.2.Chloroquine resistant destinations – Atovaquone - proguanil: Proguanil is considered safe in pregnancy; however, data are lacking on atovaquone.

Conclusions

Malaria should be suspected in the setting of fever and relevant epidemiologic exposure.

Of primary importance in the treatment of malaria is the provision of prompt, effective antimalarial therapy with the involvement of infectious disease specialist and concurrent supportive care to manage life-threatening complications of the disease .

References

1. RCOG Green–top Guideline No. 54b April 2010
2. Uptodate
3. Access medicine -Malaria
4. WHO Database