

READING SUB-TEST – TEXT BOOKLET: PART A

INSTRUCTIONS TO CANDIDATES

You must **NOT** remove OET material from the test room.

Text A

Malaria occurs mainly in the tropical areas of Africa, Asia and Latin America. Malaria is a parasitic disease spread by the bite of the female *Anopheles* mosquito, which results in infection of the red blood cell. Five main species of the malaria parasite infect humans: *Plasmodium falciparum* (the severest form), *Plasmodium vivax*, *Plasmodium ovale*, *Plasmodium malariae*, *Plasmodium knowlesi*.

Australia was declared malaria-free by the World Health Organization in 1981, and since then, only a small number of cases of locally acquired malaria have been reported from North Queensland. Severe malaria may lead to foetal loss and high maternal mortality due to hypoglycaemia and acute respiratory distress syndrome (ARDS). All forms of malaria in pregnancy may adversely affect the mother and foetus. The main complications are: miscarriage, stillbirth, preterm birth, low infant birth weight, severe maternal and neonatal anaemia.

Pregnant women should be advised to avoid travel to malaria-endemic areas. For pregnant women who cannot avoid travelling, the medical officer should consult with an Infectious Diseases specialist or experienced Travel Medicine doctor to determine the appropriate chemoprophylaxis agent.

Text B

Clinical symptoms of malaria:

Fever Malaise Headache

Abdominal discomfort Muscle and joint aches

Chills, sweats, rigours

May present as a respiratory or gastrointestinal illness

Incubation period:

95% of malaria cases develop symptoms within one month

Incubation period depends on the species:

- | | |
|---------------------------------------|--------------|
| - <i>P. falciparum</i> | 9 – 14 days |
| - <i>P. vivax</i> and <i>P. ovale</i> | 12 – 18 days |
| - <i>P. malariae</i> | 18 – 40 days |
| - <i>P. knowlesi</i> | 9 – 12 days |

Malaria should be considered in pregnant women with a fever who have travelled to malaria-endemic areas.

Text C**Laboratory diagnosis for malaria**

Both thick and thin blood smears should be prepared. They should be stained with a Romanowsky stain so as to maximise the occurrence of diagnostic criteria such as stippling on the infected red blood cell.

Blood specimens can be taken directly onto a slide from a finger or an earlobe, or by venepuncture into a tube containing an anticoagulant such as heparin or EDTA. From infants, the blood is best obtained from the heel.

If blood in anticoagulant is being used, the smears should be made as soon as possible after collection because the parasite morphology deteriorates markedly with time. Blood specimens older than 12 hours should be rejected and a new specimen collected.

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

Rapid diagnostic tests (RDTs) for malaria antigens should also be requested.

Other tests should include complete blood count, urea, creatinine, electrolytes, liver function tests, serum glucose, venous pH, serum lactate and coagulation studies.

Text D

	Severe malaria in pregnancy	Uncomplicated malaria in pregnancy
First trimester	Artesunate 2.4 mg/ kg IV on admission and repeat at 12 hours and 24 hours, then once daily until oral therapy is tolerated OR (if parenteral artesunate is not immediately available) Quinine dihydrochloride 20 mg/kg IV over 4 hours as a loading dose, then 10 mg/kg IV over 4 hours (starting 4 hours after loading dose is completed), 8-hourly until oral therapy is tolerated	Quinine sulphate 600 mg (adult under 50 kg: 450 mg) orally, 8-hourly for 7 days, PLUS clindamycin 300 mg orally, 8-hourly for 7 days
Second and third trimester	IV artesunate as above IV quinine should be avoided as it is associated with recurrent hypoglycaemia	Artemether + lumefantrine tablets 20 + 20mg 4 tablets per dose orally with fatty food or full-fat milk (to ensure adequate absorption of lumefantrine) at 0, 8, 24, 36, 48 and 60 hours, making a total adult dose of 24 tablets in 6 doses

END OF PART A
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