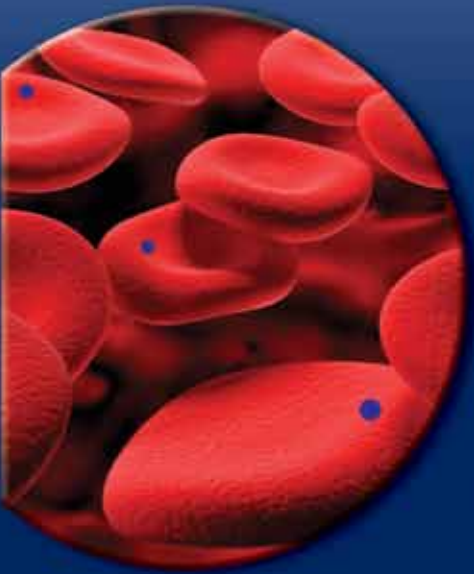
MINISTRY OF HEALTH
SULTANATE OF OMAN

Pocket Manual for the Diagnosis and Treatment of Malaria



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General

- All malaria cases should be notified within 24 hours
- Availability of antimalarial medicines is limited only to government health facilities
- Management of malaria cases is free of charge

Malaria Diagnosis

- Prompt parasitological confirmation by microscopy is recommended in all patients suspected of malaria before treatment is started.

◊ All cases must be confirmed microscopically before treatment

◊ All referred cases from private health institutions must be confirmed before treatment

◊ No treatment on the basis of clinical diagnosis, and

◊ No presumptive treatment of malaria.

Treatment of uncomplicated P.falciparum

- Artemether + lumefantrine

– The recommended treatment is a 6-dose regimen over a 3-day period. The dosing is based on the number of tablets per dose according to predefined weight bands (5–14 kg – 1 tablet, 15–24 kg – 2 tablets, 25–34 kg – 3 tablets, and >34 kg –4 tablets), given twice a day for 3 days.

Body weight in kg (age in years)	No. of tablets at approximate timing of dosing*					
	0 h	8 -12 h	24 h	36 h	48 h	60 h
5–14 (<3)	1	1	1	1	1	1
15–24 (>3–8)	2	2	2	2	2	2
25–34 (>9–14)	3	3	3	3	3	3
>34 (>14)	4	4	4	4	4	4

* The regimen can be expressed more simply as follows: the 2nd dose on the

1st day should be given any time between 8 h and 12 h after the first dose. Dosage on the second and third days is twice a day (morning and evening).

- Primaquine (anti-gametocytes)

  Single dose of 0.75mg/kg of base (maximum of 45mg of base in adults).

  This dose of primaquine (0.75mg/kg) used in P. falciparum is well tolerated and prior testing for glucose-6-phosphate dehydrogenase (G6PD) deficiency is not required.

Treatment of uncomplicated P.vivax, ovale or malariae

- Chloroquine (chloroquine-sensitive infections)
  - ◊ Chloroquine tablet 250mg (150mg base):
    - ☐ Loading dose of 10 mg/kg (of base) (600 mg in adults) then a single dose of 5 mg/kg (300 mg in adults) after 6–8 hours, then a single dose of 5 mg/kg (300 mg in adults) once daily for 2 days
- Artemether +Lumefantrine (chloroquine resistance infections)
  - ◊ See dose above as for P.falciparum malaria
- Primaquine (anti-relapse treatment) - all cases of vivax and ovale
  - ◊ Primaquine (tablets of 7.5 mg base)
    - ☐ Normal G6PD activity: Adult: 15 mg daily for 14 days. Children: 0.25 mg/kg daily for 14 days.

- In G6PD-deficient or partial activity:
  Adult: 30 mg once a week for 8 weeks
  Children: 0.75 mg/kg once a week for 8 weeks.

◊ The G6PD status of the patient should be verified before the start of primaquine at the dose it is used as anti-relapse treatment.

◊ Primaquine is contraindicated in pregnant women, infants (< 1year of age) and conditions predisposing to granulocytopenia, including active rheumatoid arthritis and lupus erythematosus

Treatment of any mixed infection that includes P.falciparum

- Artemether + lumefantrine
- Primaquine (14 days anti-relapse treatment) for mixed infection that includes P.vivax or P.ovale.
- Primaquine (single dose anti-gameto-cyte treatment) for mixed infection of P.falciparum and P. malariae.

Treatment of severe malaria

- Severe malaria is a medical emergency. Following a rapid clinical assessment and confirmation of the diagnosis, full doses of parenteral antimalarial treatment should be started without delay with whichever effective antimalarial is first available.
- Artesunate is the recommended treatment (all age groups including in pregnant women).
  - Artesunate: 2.4mg/kg body weight is given as IV injection on admission (time=0hr), 12hr and 24hr, then once a day (IV treatment should continue for a minimum of 24 hours, even if the patient could tolerate oral medication earlier).

- If artesunate cannot be administered by IV injection, it can be given in the same dosages by IM injection preferably in the anterior thigh.

- Once the patient is able to tolerate oral medication or after 24hours of parenteral treatment, complete treatment with a complete 3 day course of Artemether + lumefantrine (dose is same as above for uncomplicated falciparum malaria)
- Remember to give single dose primaquine (anti-gametocyte treatment)

Chemoprophylaxis for travellers

- All travellers to malaria endemic areas should be educated on the need and use of adequate protective measures against malaria.
- Young children, pregnant women, people living with HIV/AIDS, people who are immunosuppressed and elderly travellers are particularly at risk.
- Malaria, particularly P. falciparum, in pregnant travellers increases the risk of maternal death, miscarriage, stillbirth and neonatal death.
    - ◊ Pregnant women should be advised not to travel to malaria endemic areas if possible, however if she must travel, appropriate preventive measures must be used including prevention of mosquito bites. See below for the use of chemoprophylaxis in pregnancy under each drug section.
- The following are the options available as chemoprophylaxis
    - **Doxycycline**
        - ◊ (100mg capsule/tablet) dose: 1.5mg/kg. Adults dose - 100mg daily
        - ◊ DOX should be started the day before arrival in the risk area, and continued for 4 weeks after return.
        - ◊ DOX is contraindicated in pregnancy, breastfeeding mothers and children under 8 years of age.
    - **Mefloquine**
        - ◊ (250mg tablet) dose: 5mg/kg /weekly. Adults 250mg / weekly

Weight (kg)	Age (years)	Number of tabs.
< 5	< 3 months	NR**
5 – 12	3-23 month	¼
13 – 24	2 – 7	½
25 – 35	8 – 10	¾
36 – 50+	11 – 14 +	1

◊ **NR - Not recommended

◊ MQ should preferably be started 2–3 weeks before departure, to achieve higher pre-travel blood levels and to allow side-effects to be detected before travel so that possible alternatives can be considered.

◊ MQ should also be continued for 4 weeks after return from the malaria risk area.

◊ MQ is not recommended for use in the 1st trimester of pregnancy, but can be safely used in the 2me and 3rd trimesters of pregnancy.

- **Chloroquine (for vivax only)**

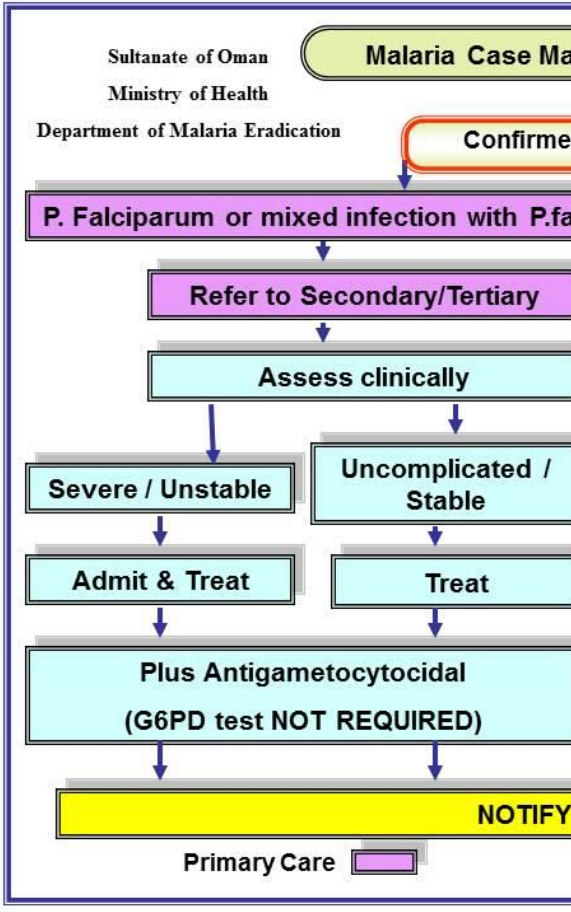
◊ CQ (150mg base) 5mg/kg weekly

◊ CQ should be started 1 week before arrival to the malaria risk area, and continued for 4 weeks after return.

◊ CQ can be used during pregnancy.

Weight (kg)	Age (years)	Number of tabs.
5 – 6	< 4 months	¼
7 – 10	4-11 month	½
11 – 14	1 – 2	½
15 – 18	3 – 4	¾
19 – 24	5 – 7	1
25 – 35	8 – 10	1
36 – 50	11 – 13	2
50 +	14 +	2

ANNEX 1: CASE MANAGEMEN



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