Guidelines for treatment of malaria

The aim of the National Malaria Control Program is to accelerate malaria control through integrated vector control measures to achieve the target where malaria will no longer be a major public health problem.

Malaria transmission in Saudi Arabia is confined to the southwest (Jizan, Asir, Al Baha, Qunfuda, and Lith) and some isolated rural foci in the Jeddah, Makkah, Madina, and Taif regions. Plasmodium falciparum predominates in these areas. The central province and most of northeastern regions are free from transmission. Transmission is seasonal with peak incidence from October to March.

Malaria importation poses a health hazard and more than 16% of the total cases is reported annually from countries representing a wide variety of sensitivity to chloroquine (1). Resistance (R!) of P. Falciparum to chloroquine has been documented for some locally acquired cases in the southern region. However, the resistance is local and of low degree so that chloroquine remains operationally effective.

The drug policy (2,3,4,5) is based on practical issues so as to meet the following objectives:
Early treatment of any diagnosed case to relieve illness and prevent complications
Stop or delay the spread of *P. falciparum* resistance to chloroquine;
Prevent resumption of transmission to areas free of local transmission;
Prevent relapse in *P. vivax* and *P. ovale* infections.

Dependent of the malaria case being uncomplicated, complicated or severe the following management policy is recommended;
1. All patients should have a thick blood film, the malaria parasite should be identified to species and a quantitative parasites count should be made on the initial blood film.

Highly suspected malaria cases are given presumptive treatment after taking a blood slide. Complete and radical treatment is given to positive cases. All patients regardless of species, are immediately treated with chloroquine (10 mg base/kg followed by 5 mg base/kg 6, 24 and 48 hours later).
2. First-line treatment:
For uncomplicated *P. falciparum* malaria cases, Chloroquine is given as above. A single dose of Primaquine 0.5 mg/kg or 0.75 mg/kg is given as gamaetocidal. A follow-up parasite count should be made 24 hours after the initial chloroquine dose to measure the level of parasitaemia.

For *P. vivax* and *P. ovale* infection, chloroquine as above plus primaquine 0.24 mg/kg daily for 14 days or 0.75 mg/kg for 8 weeks as antirelapse treatment.
3. Second-line treatment:
For resistant *P. falciparum* infection, Fansidar (sulfadoxine 25 mg/kg and pyremethamine 1.25 mg/kg) is given in a single oral dose.
4. Third-line treatment:
For resistant *P. falciparum* infection if there is no response to Fansidar, then shift to Mefloquine 15 mg/kg single or better split oral dose, if no response then shift to Quinine dihydrochloride 10 mg/kg 8 hourly for 7 days accompanied by tetracycline 4 mg/kg 6 hourly for 7 days (tetracycline should not be given to pregnant women, lactating mothers and children below 8 years).

For complicated and severe cases patients should be treated in hospitals parenterally as follows:

Quinine dihydrochloride 20 mg/kg as a loading dose by infusion over 4 hours, in 5% dextrose solution

Quinine dihydrochloride 10 mg/kg as maintenance dose 8 to 12 hours after the start of the loading dose over 4 hours repeated every 8-12 hours until the patient can take oral medication.

All drugs mentioned above are available throughout Saudi Arabia and kept in strategically suitable places to meet the requirements of any situation. Drug sensitivity test is conducted regularly in Jizan and the ministry of Health routinely updates this antimalaria treatment through circulars to all regions of Saudi Arabia.

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References

1. Annual malaria control programme report, 1996 (unpublished data).
2. Practical chemotherapy of malaria. WHO TRS 1990; No 805.
4. World Health Organization. Chemotherapy of Malaria. 2nd ed. Geneva: WHO, 1981.
5. Report on the regional seminar on malaria chemotherapy, (1992) WHO-EM/MAL/220-E/L.

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The SEB welcomes submission of articles from public health and community medicine practitioners throughout Saudi Arabia. Submitted articles should be brief — no longer than 800 words and should say only the minimum necessary to cover the topic clearly. Each article should be submitted in duplicate as a double-spaced hard-copy with tables, figures references and names and affiliations of all authors. We also appreciate an additional copy as a word processing file on a floppy diskette.