



WHO INTER-REGIONAL TECHNICAL MEETING ON MALARIA ERADICATION  
TEHERAN, 1 - 6 MAY 1962

---

EM/ME-Tech.3(a)/19

16 April 1962  
ENGLISH ONLY

RADICAL CURE OF MALARIA IN JORDAN \*

Malaria is a well-known disease in Jordan, hyper-endemic in the Jordan valley and plateaus associated with marshes, and low or moderately endemic in plateaus away from the perennial streams (Leeson 1933, Farid 1949 and 1952).

Malaria control measures in Jordan, although not undertaken on uniform levels all over the country, were adopted from 1949 onwards under the auspices of UNRWA. In 1950, a campaign of residual spraying with DDT was started in the country, mainly for Palestine refugee camps and the surrounding villages. Indoor spraying was found, not to be fully effective, on account of one of the malaria vectors, A. sergenti, being exophilic and exophagic in its behaviour and the spraying was, therefore, reinforced since 1952 by extensive larviciding operations. Malaria incidence was drastically reduced by these control measures as noted by Farinaud (1956) in the control areas.

The malaria control programme was converted into a malaria eradication programme in 1958. The first year of country-wide operations was 1959, including a combination of surveillance with localized spraying and larviciding in West Jordan, blanket larviciding and total coverage spraying in the Jordan valley and lowland areas of the Dead Sea, and spraying and larviciding or spraying alone in East Jordan.

---

\* Summary of Report on "Preliminary observations on Radical Treatment of P. vivax and P. malariae cases with Primaquine and Camoquine/Chloroquine in Jordan during 1960-1961" by Dr. S. M. Rafi, WHO Senior Adviser, Jordan

In 1960, the second year of attack phase, epidemiological investigations, supported by entomological findings showed that the transmission has been interrupted in West Jordan and the area entered the consolidation phase. At present, the consolidation work has been extended to most parts of former malarious areas in Jordan (the whole of West Jordan, the Jordan valley and the northern area of East Jordan) and only the southern district (Kerak area) of East Jordan still need protection by attack measures. During this year, the surveillance programme in Jordan is expected to cover the whole country.

Data on the radical treatment of P. vivax and P. malariae cases reported hereunder was recorded during the years 1960 and 1961 through surveillance operations. All P. vivax or P. malariae cases detected by surveillance agents were treated with standard dose of anti-malaria drug schedule as follows:

Day of treatment	Drugs	Age (years)					**
		Over 15	11-15	6-10	1-5	Under 1	
<u>1st day</u>							
Initial dose	Chloroquine	600 mg	450 mg	300 mg	150 mg	75 mg	
	Primaquine	15	15	15	7.5	3.75	
2nd dose *	Chloroquine	300					
<u>2nd day</u>	Chloroquine	300	150	150	150	75	
	Primaquine	15	15	15	7.5	3.75	
<u>3rd day</u>	Chloroquine	300	150	150			
	Primaquine	15	15	15	7.5	3.75	
<u>4th till</u> <u>14th day</u> (daily dose)	Primaquine	15	15	15	7.5	3.75	

\* 8 hours after initial treatment

\*\* No treatment with Primaquine for those aged under 4 months

It was decided that the radical treatment for all malaria cases detected should be carried out, if possible, in hospitals. However, some of these positive cases, who for some reason could not get treatment in the hospitals, were treated at their houses. In this connection, a special person was assigned to look after their treatment by daily visits to their houses for fourteen consecutive days. Drugs were taken in the presence of the distributor. All malaria cases, after radical treatment, either in hospital or at domicile are followed up by monthly visits to their place of residence in order to take blood smears for microscopic examination. The following table gives the number of malaria cases of various age groups treated during the last two years and the number of monthly visits (blood slides) after radical treatment of all positive cases:-

Place where treated	Monthly Blood Smears taken after treatment	No. of cases of various age groups treated						Relapse
		Over 15	11-15 yrs	6-10	1-5	Under 1	Total	
In hospital	10-12	7		1			8	None
	7-9	5					5	"
	4-6	3		1			4	"
	2-3	17	2	1	4	1	25	"
In houses	2-3	19*	10*	3	14	4	50	"
Total	10-12	7		1			8	"
	7-9	5					5	"
	4-6	3		1			4	"
	2-3	36	12	4	18	5	75	"

\* One case of P. malariae infection. All the rest are P. vivax cases

A total of 90 cases of P. vivax infection and 2 cases of P. malariae were thus treated with a standard radical cure treatment of Chloroquine or Camoquin and Primaquine as recommended by WHO in this series of observation, and no relapse was seen even after follow-up of some of these treated cases, for a period of 12 months, by monthly microscopic examination, of their blood for malaria parasites.

All these cases are still under observation for possible recurrence or relapse and will be reported later. No toxic symptoms have appeared in any of the cases treated with Primaquine.