

a 60252

WORLD HEALTH
ORGANIZATIONORGANISATION MONDIALE
DE LA SANTEEXPERT COMMITTEE
ON MALARIAWHO/MaI/71 ✓
15 March 1951

ORIGINAL: ENGLISH

The Secretary of the Expert Committee on Malaria has the honour to communicate hereunder the SUMMARY AND CONCLUSIONS together with the relevant TABLE of the paper:

THE RESPONSE OF PLASMODIUM MALARIAE INFECTIONS TO
METACHLORIDINE, CHLORGUANIDE (PALUDRINE), AND INTRAMUSCULAR CHLOROQUINE

by Sol B. McLENDON, M.D.,
South Carolina State Hospital

and

Martin D. YOUNG, Sc.D
Federal Security Agency, Public Health Service
National Institutes of Health, Microbiological
Institute, Laboratory of Tropical Diseases
Columbia, South Carolina

SUMMARY AND CONCLUSIONS

1. The efficacy of metachloridine, chlorguanide (paludrine) and intramuscular chloroquine was tested against 33 induced infections of Plasmodium malariae.

Plasmodium malariae

2. No toxic reactions from any of the drugs were noticed.

3. The poorest results were obtained with metachloridine. Chlorguanide gave only slightly better results but not so good as oral or intramuscular chloroquine.

4. Chloroquine dihydrochloride given in a single intramuscular injection of 450 mgm produced the best results. The removal of parasites from the blood stream and the elimination of fevers were relatively rapid. The action was very similar to that obtained by administering chloroquine orally in doses totalling 1.5 and 2.4 grams. The intramuscular method has the obvious advantage of requiring only one injection.

18281

Table 1. The parasitological and clinical response of P. malariae infections to different drugs

| Patient | Number of fevers before start of therapy | Parasites per cmm. on first day of therapy | Parasites removed in 24 hours per cent | Days to negative smear | Days until afebrile (< 100°F) |
|--|--|--|--|------------------------|-------------------------------|
| Metachloridine 0.5 gram every 6 hours for 6 days | | | | | |
| JHT | 20 | 5440 | 0 | 14 | 6 |
| RS | 18 | 3376 | 29 | 10 | 2 |
| CC | 33 | 8050 | 40 | 18 | 5 |
| JW | 25 | 1562 | a | 7 | 0 |
| AL | 24 | 4328 | 18 | 12 | 4 |
| WC | 25 | 5750 | 47 | 9 | 5 |
| FJ | 31 | 3850 | a | 14 | 5 |
| WM | 26 | 1287 | b | 8 | 2 |
| JHJ | 21 | 3102 | 89 | 12 | 2 |
| PG | 20 | 2352 | 28 | 15 | 6 |
| Chlorguanide 0.1 gram t.i.d. for 10 days | | | | | |
| AH | 28 | 4290 | 58 | 6 | 0 |
| OS | 15 | 7160 | a | 13 | 5 |
| FQ | 31 | 2690 | b | 13 | 0 |
| CL | 35 | 1520 | 6 | 10 | 0 |
| EB | 21 | 1552 | 33 | 14 | 0 |
| JHR | 28 | 2440 | a | 8 | 1 |
| ER | 24 | 968 | 36 | 12 | 0 |
| Chloroquine dihydrochloride. Single intramuscular injection of 225 mgm | | | | | |
| OS | 9 | 17550 | b | 11 c | 2 d |
| GD | 16 | 6420 | 53 | * | 2 d |
| WN | 23 | 3733 | 54 | ** | 3 d |
| NL | 15 | 16512 | 37 | / | 4 d |

Table 1 (continued)

| Patient | Number of fevers before start of therapy | Parasites per cmm. on first day of therapy | Parasites removed in 24 hours per cent | Days to negative smear | Days until afebrile (< 100°F) |
|---|--|--|--|------------------------|-------------------------------|
| Chloroquine dihydrochloride. Single intramuscular injection 450 mgm | | | | | |
| NL | 18 | 29825 | 79 | 10 | 2 |
| GD | 23 | 9840 | 84 | 4 | 2 |
| WN | 28 | 4833 | 94 | 3 | 0 |
| CW | 8 | 18368 | 65 | 5 | 0 |
| AP | 7 | 2140 | 89 | 7 | 2 |
| JTW | 7 | 9150 | 11 | 10 | 0 |
| CG | 14 | 4096 | 65 | 4 | 0 |
| AG | 5 | 3630 | 87 | 5 | 2 |
| SWP | 2 | 6350 | 79 | 5 | 2 |
| BM | 21 | 2820 | 95 | 5 | 0 |
| EC | 1 | 7080 | 57 | 7 | 2 |
| MIC # | 13 | 5150 | 98 | 2 | 1 |

- * still positive after 28 days
- * still positive after 18 days
- # still positive after 16 days
- a parasites increased
- b no data on this day
- c relapsed 18 days later
- d fevers returned later
- # sporozoite induced. All others induced by injecting infected blood.