ACC

10000 | 120 | 1956

10000|120|1956 M2A MALARIA 1st Cons

Opened Feb. 8, 1944 - Closed Sept. 22, 1944

Feb - Sept 1944

2080

Declassified E.O. 12356 Section 3.3/NND No. 785020

Subject: [illegible] Data on Malaria

Military Mission
Italian Army
ROME
I/28/1868
22 Sept 44.

DMS AFHQ (2 copies)

Copy to: DMS HQ AAI

Translation of notes on the above subject from Ministry of War are forwarded for information.

Major,
D.A.D.M.S.
M.M.I.A.

/RSG

1642

~~Translation~~

MINISTERO DELLA GUERRA
Direzione Generale di Sanità Militare

Ref: 4/2714/IS 19 Sept 44

To: Military Mission Italian Army

Subject: Epidemiological Data on Malaria in Sardinia & Corsica during the years 1942 - 43

With reference to verbal request of MMIA we give you the following epidemiological data concerning malaria cases amongst the troops in Sardinia and Corsica during the year 1942 - 43.

1. SARDINIA In 1942 about 41,000 cases of malaria have been registered. Of these 22,500 cases were primary and 18,500 recurrent. 76 cases of maligant malaria out of which 41 men died are to be noted. Percentage considering actual strength was 33%. In 1943 we had about 98,000 cases of malaria of which 47,000 were primary and 51,000 recurrent. We had 473 cases of maligannt malaria of which 238 men died. Percentage considering actual strength was 90%.

This is a round figure because some of the units had a 90% proportion of malaria while some others had a 15-20% proportion only. These figures have already been sent to the American H.Q. through the Sardinia Military Command - Intelligence Office, with letter reference 1794 dated 31.3.44 of the Sardinia Medical Directorate.

The larger units which have had more malaria cases (excluding smaller units) are the following:-

205 Coastal Div located at that time in the Sulcis Area
203 " " " " " " on the South East coast
204 " " " " " " on the North West coast
IV Coastal Brigade " " " " on the North East coast
236 Piceno Inf Regt posted at that time to the defence of airfields
Calabria Inf Div located at that time on the North of the Island
Cremona Inf Div (for the period 1942) Located in the Gallura Area and South of Macomer
Nembo Paratroops Div located at that time between Campidano and Trexenda
Sabauda Inf Div located at that time in the Iglesias Decimo Area
Bari Inf Div located at that time in the Tirso Valley
33 Coastal Brigade located at that time in the Oristano - Arborea Area
Armoured Motor Group " " " " in the San Luri - Cagliari Area
19 Coastal Regt " " " " on the Eastern coast
Coastal Batteries located at that time all along the coast

1641

The above mentioned areas correspond to those marked red or violet on the malarial map sent by this Ministry to MMIA (letter ref 4/1056/IS dated 28 April 44) - copy to the American Medical Service of the Island.

The Provinces which have been more severely affected by malaria are Cagliari and Sassari. Most of the above mentioned larger units which were transferred very often from one area to another, especially in 1943, have been disbanded. The units have been sent to the Mainland. Many military [illegible]

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1641

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The Provinces which have been more severely affected by malaria are Cagliari and Sassari. Most of the above mentioned larger units which were transferred very often from one area to another, especially in 1943, have been disbanded. The units have been sent to the Mainland. Many military who were formerly on the strength of the larger units and of the other units have been released from the Army.

2. CORSICA. In 1942 no malaria cases were observed.

In 1943 we had only 11,500 cases of malaria of which 8,600 were primary and 2,900 recurrent cases. One case of malignant malaria was followed by death. Percentage considering actual strength is 15% Primary malaria cases have beeno observed chiefly in the following larger units and other Corps:-

226 Coastal Div located in the South coast of the Island
Granatieri Group " " the Ajaccio plains
182 Coastal Regt " " the East coast of the Island
225 Coastal Div located during the period of the war operations in the Punteleccia Area
Coastal Batteries located all along the coast
Engineers and smaller units.

The malarious areas in Corsica are mainly on the coast and in the low valleys of the Rivers Gulo, Tavignano, Fiumorbo, Ortolo and Taraano.

Recurrent malaria cases in Corsica are to be connected with Cremona Inf Div which came from Sardinia in November 1942 and with Blackshirt Units which came from the Balkans and Africa. It has not been possible to check the epidemiology in Corsica until September 1943. War events caused a lot of trouble in the organisation which had been patiently formed and collection of epidemiological data was thereby rendered very difficult.

per IL DIRETTORE GENERALE
IL COLONNELLO MEDICO p.s.
(N. Maugeri)

Subject: Issue of Mosquito Nets to Italian Troops

Army Sub Commission, MMIA
H.Q., A.C.C.
ROME
AG/7/1
13 Sept 44

Ministry of War

Reference your G/2196/801 of 7 Sept 44.

1. There is no authority for the general issue of mosquito nets to Italian troops whether in hospital or not.

2. Certain numbers of mosquito and bush nets have been issued to Italian combat and service troops and hospitals with 8th Army, but these are special issues made by the formations under whose command the Italian units were operating and not a general release through MMIA channels.

3. The Commando Truppe Ausiliarie Ovest should therefore make their request to the Allied Command with whom they are operating.

13/9/44

1640

Major General,
Army Sub Commission, ACC.

/RDG

Copy to: Med. MMIA.

M/2A

Subject:- Mepacrine Policy - Italian Army.

HQ. AAI. CMF.
Ext. 324.
3833/2 M.

10 Aug. 44.

DADMS. Army Sub Commission, ACC.

The following extract from DMS. AFHQ. letter M. 6163 dated 5 Aug. 44 is forwarded for information:-

" It is considered that the general policy should be that Italian troops attached to BES. or other US. Units should comply with instructions given to the US. troops to whom they are attached. In their case, decision as to whether or not they take mepacrine, should be a US. responsibility.

Italian troops attached to British or Allied troops should comply with the instructions given to the troops to whom they are attached and no general authorisation for administration in all areas should be given. The case of any particular Italian Unit located in a Mepacrine free area and not required to take mepacrine as an "Operational Unit", should be individually reviewed if the incidence of relapses is such as to interfere with its military efficiency".

2 Cr.

1639

R. See Ritchie
Major-General,
D.M.S., A.A.I.

GLR/DEW.

M/3/1605

Subject :- Mepacrine - Italian Armed Forces.

HQ AAI CMF.
Ext 319.
4011 M.

/8 Aug 44.

O.C., "A" Command Depot of Medical Stores.

Copy to D.M.S., A.F.H.Q.
D.A.D.M.S., A.S.C., A.C.C., Main H.Q.(MMIA).

Reference this H.Q. memorandum No 4039 M of 6 Aug 44.

It has now been ruled that Italian military personnel serving with U.S. Forces in P.B.S. Area will be required to take Mepacrine under the same conditions as U.S. Forces. The two further consignments of mepacrine to be issued to the Italian Armed Forces should, therefore, be increased to 4 million Tablets.

FJD/fp.

Major-General,
D.M.S., A.A.I.

Copy to :- 4039 M.

Instr. 11/8/44 → L/C

Subject: Malaria - Italian Troops u/c Polish Corps

Army Sub Commission, MMIA.
H.Q., A.C.C.
ROME
M/2A/1526
4 August 44

DMS AAI

Copy to: DDMS POLCORPS
O.C. 9 Malaria Field Lab.
MMIA LO POLCORPS
MMIA LO CIL

Reference your letter 3833/2 M of 26 July 44, with attached report 64/34 from OC 9 Malaria Field Laboratory (correspondence not to MMIA LOs.) The following comments are made:-

1. Mepacrine Adequate supplies available in Sardinia and mainland since 1st May 44. If mepacrine is not taken this is entirely due to laxity of discipline or failure of units to indent on main depots.

2. M & Bush Nets There is no authority for issue of bush nets or mosquito nets on a general scale to Italian troops. Italian Army have never possessed any nets of their own. Issues made to combat troops of 8th Army and CIL were entirely due to Allied medical recommendation. These issues are for certain specified troops. Italian L of C and other labour units with 8th Army have not been issued with nets.

22,450 Bush Nets for Italian troops of CIL were released to 5th Corps on 17 June. CIL passed to command POLCORPS on 16 June. Confirmation is awaited from MMIA LO CIL if these nets did in fact actually reach CIL and Bambo.

3. Clothing CIL troops were issued with Shorts KD but were allowed to retain their Italian clothing (long knickerbockers). They therefore have suitable clothing but probable do not change at night. No other clothing is available at present. This is a disciplinary matter.

4. Spraying Pumps DADOS this office have requested POS AFHQ if the

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4. Spraying Pumps DADOS this office have requested DOS AFHQ if these are now available. (100 spraying pumps). 1657

5. Microscopes & Stains Italian authorities are sending a further one or two microscopes and microscope stains to CIL.

6. Malaria Officer An anti-malarial officer is being sent to CIL.

7. 12 SEZIONI DI SANITA This unit is being re-equipped. Transport and equipment could not be brought from Sardinia.

/2..

8. Incidence of Malaria 218 cases of malaria (mostly recurrent) in one week may appear very high by British standards. The Italian medical authorities at Ministry of War maintain that probably at least 80% of these are recurrent. Most of these troops have been stationed for over a year in Sardinia. In 1943 there were 220,000 troops in Sardinia and 50,000 primary and 100,000 recurrent cases of malaria. The malarial officer will, on arrival, investigate this matter.

9. Anti-Malarial Discipline It is considered that the powers of discipline of Medical Directorate, Ministry of War are to a great extent limited by the fact that Italian units of CIL are under Allied command. This is especially so with unit commanders as opposed to medical officers.

Many letters have been written to units of this subject but unit commanders still require to become "malaria minded" and thereby enable the medical officers to carry out proper measures within the unit. It is suggested that in serious cases of lack of anti-malarial discipline, the matter should be dealt with by the Allied formation under whose command the Italian unit is operating.

W. C. Heggie
Major.
D.A.D.M.S.
Army Sub Commission, ACC.

/MBG

1636

Subject:- Malaria Italian troops under command 2 Polish Corps.

M.M.I.A.	MED
FILE REF.	
Date Recd	1 8 44

HQ. AAI. CMF.
Ext. 324.
3853/2 M.
31 Jul. 44.

DADMS.
Army Sub Commission (MMIA) ACC.

Further to this HQ. letter of even number dated 26 Jul. 44.

1. Attached copy of this HQ. 3407/10/4(AE) dated 29 Jul. 44. is forwarded for information.

S. See Ritchie
Major-General,
D.M.S., A.A.I.

HDC/DIE.

MMIA/499

copy.

Subject:- Malaria - Italian troops under command 2 Polish Corps.

HQ. AAI.
3407/10/Q(AE).
29 Jul. 44.

Medical.

Reference your 3833/2M of 26 Jul. 44.

1. The supply of clothing and equipment for the Italian Armed Forces is the responsibility of Army Sub-Commission ACC(MMIA).

2. The procedure laid down is that MMIA issue clothing and equipment from Italian Stocks and from stocks sent over under Allied arrangements. In the event of stocks from these sources being inadequate to meet legitimate demands, MMIA. demand on this HQ. and assistance is given as far as possible from Allied Army stocks subject to AFHQ. agreement.

3. It is noted you have already drawn the attention of MMIA. to the report made by 9 Malaria Field Laboratory and it is considered that it must be left to them to take the necessary action in accordance with the policy laid down. No requests for additional clothing or extra malarial stores have so far been received.

(sgd) A.W. MACKAY Lt.Col.

for Brigadier., DQMG.

Copy to-"A".

Subject:- Malaria - Italian Troops under command 2 Polish Corps.

HQ. AAI. CMF.
Ext. 324.
3833/2 M.
---
26 Jul. 44.

DADMS.
Army Sub Commission (MMIA) ACC.

Reference conversation 25 Jul. 44: Chalke - Heggie.

1. A copy of a report by OC. 9 Malaria Field Laboratory together with a copy of this office 3833/2 M. dated 26 JuL. 44, are forwarded for information.

2. Will you please take action as indicated and forward your comments on OC. 9 Malaria Field Laboratory Report.

SPA:17.

H.D. Chalke
Lt-Col

(Major-General,
D.M.S., A.A.I.

HDC/DIE.,

A/Q to see ref. para 6(i) of O.C. 9 Mal. Fd. Lab. Report.

M/2/1634.

Subject:- Malaria - Italian Troops under command 2 Polish Corps.

HQ. AAI. CMF.
Ref. 324.
3833/2 M.

OC. 9 Malaria Field Laboratory.

26 Jul. 44.

Reference your 64/34 dated 21 Jul. 44.

1. The matter has been brought to the notice of Army Sub Commission ACC (AMIA), who is causing an investigation to be made on the points raised.

2. Adequate supplies of mepacrine have been sent to SARDINIA (6 million tablets since 1 May 44). Repeated letters have been sent to the Italian Ministry of War who have issued directives in the supply and the taking of mepacrine and the carrying out of anti-malaria precautions generally (see copy of AMIA - M/2A/1158 dated 11 Jun. 44 attached).

3. All Italian Combattant troops with Eighth Army were issued with nets and 22,430 bush nets were released to 5 Corps which was enough for all Italian troops under their command and for hospital patients. These issues are additional to the scale authorised and were made on medical recommendations.

4. The scale of anti-malaria supplies laid down in AFHQ. AG.400-1(Italian)A-C dated 30 Apr. 44 is :-

(a)	Anti-mosquito cream	375 lbs.)	
	" " Spray	20 Galls.)	per 1000 men
	Malariol.	30 ")	per month.
	Paris Green.. ..	14 lbs.)	

(b) No Spraying pumps were available at that date but arrangements were to be made for 100 such pumps to be provided by D.O.S. AFHQ.

5. It is understood that there is a shortage of clothing

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5. It is understood that there is a shortage of clothing supply for the Italian Army.

6. The shortage of Stains has been taken up with the ADP. at this HQ.

7. Anti-malaria discipline is notoriously poor in the Italian Army. It is agreed that the OC, 12 Sezione Disinfezione should act as Malaria Officer to ADMS. C.I.L.

1633

8. The equipping of Unit Anti-malaria Squads and 12 Sezione Disinfezione is considered to be essential.

9. Will you please keep in close touch with the situation, particularly with regard to para. 6(i) of your letter.

H.D. Wadlow Lt Col

Major-General,
D.M.S., A.A.I.

HDC/DIS.

copy.

SECRET.

Subject:- Malaria - Italian Troops under command 2 Polish Corps.

To: DDMS. 2 Polish Corps.

64/34.

From : OC. 9 Malaria Field Laboratory.

1. Following information received of a high incidence of malaria among Italian troops (C.I.L.) under command 2 Polish Corps a visit was paid to the Ufficie Sanitaria C.I.L. on 19 Jul. 44 in the company of ADH. 2 Polish Corps and Lieut. Mazzarella Italian Liaison Officer. In the absence of the ADMS. (Col. Poless) the situation was discussed with the DADMS. (Capt. Podera).

2. The following information was given by DADMS.

(a) Returns of Malaria cases from C.I.L. to 2 Polish Corps have been:-

Week Ending.	June.		July.		
	17	24	1	8	15
No. of cases.	8	16	21	28	218

(For the week ending 15 Jul. 44 an additional 6 cases were evacuated through Polish Medical Units and are not included in the figure above).

(b) Cases of malaria are diagnosed on clinical grounds alone. Only 470 Field Hospitel is equipped for microscopic diagnosis because of shortage of stain.

(c) The strength of the C.I.L. has increased from about 9,000 in April 44 to about 24,000 at present. In the three weeks ending 15 July 44 the strength increase was 6,500.

(d) All or almost all of the troops of the C.I.L. have been stationed in Sardinia and have been sent fro m there from March 44 onwards.

(e) Suppressive mepacrine is not taken by Italian troops in SARDINIA.

(f) The treatment used for malaria cases in the Italian Forces is:-

1 gm quinine daily by injection for 1 week.
0.3 gm mepacrine every other day and plasmoquine on the intervening days for 1 further week.

1632

(For the week ending 15 Jul. 44 an additional 3 cases were evacuated through Polish Medical Units and are not included in the figure above).

(b) Cases of malaria are diagnosed on clinical grounds alone. Only 470 Field Hospital is equipped for microscopic diagnosis because of shortage of stain.

(c) The strength of the C.I.L. has increased from about 9,000 in April 44 to about 24,000 at present. In the three weeks ending 15 July 44 the strength increase was 6,500.

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1632

3. The cases of malaria reported are considered by the Italian authorities to be relapses. The sudden incidence of cases at this time of year is not, however, suggestive of this but rather of a crop of primary cases. It is impossible to decide on information at present available, whether they have been infected in this area or are introduced from SARDINIA.

4. The high malaria incidence is an indication of a considerable reservoir of infection in the formation. Attention has already been drawn (in this office reports 84/32, 91/31, 91/37 and 91/42) to the inadequacy of personal precautions in the C.I.L. These two considerations coupled with the high density of A. maculipennis which has been found in many parts of the area, constitute a serious danger to all troops operating in the area.

5. DADMS. GIL. also stated that the following deficiencies in malaria precautions existed.

(a) Only 4,000 tents mosquito proofed bivouac are in use, (adequate for 8,000 troops). Besides this the only nets provided are for officers and hospital beds.

Sheet 2/

(b) Clothing giving adequate protection of the legs and arms is possessed by less than 50% of personnel.

(c) Only 50 hand-sprayers are in use, 200 more were received but in bad condition.

6. The following immediate recommendations are made:-

(a) The strictest supervision of suppressive treatment with mepacrine should be maintained.

(b) Nets should be issued to cover 100% of personnel.

(c) Clothing giving adequate cover to the legs and arms should be demanded for issue to those not already supplied. Sundown precautions should then be strictly enforced.

(d) Strict supervision of the application of DMP. (repellent fluid) should be maintained. Troops not provided with suitable protective clothing should apply it to all exposed skin.

(e) A Malaria Officer should be attached to ADMS. C.I.L. to tour units and aid in the enforcement of these measures. OC. 12 Sezione Disinfezione might be used for this purpose.

(f) An investigation of the recent high incidence should be made by C.I.L. so that it may be decided where the cases were infected.

(g) All cases of fever should be immediately evacuated to hospital for a full course of treatment. Microscopical diagnosis should be instituted for all cases.

(h) Unit Malaria Squads should be equipped and put into operation. 12 Sezione Disinfesione should be given equipment and transport and assist the unit malaria squads in adult and larval destruction.

(i) OC. 9 Malaria Field Laboratory should be kept informed of the malaria incidence in the C.I.L. as it may be necessary, if the high incidence continues or increases, to recommend 'booster quinine' treatment or even withdrawal of the formation from the line.

(sgd) W.H.R. LUMSDEN.
Lieut-Colonel, RAMC.
Officer Commanding 9 Malaria Field Laboratory.

In the Field.
21 Jul. 44.

1631

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(sgd) W.H.R. LUMSDEN.
Lieut-Colonel, RAMC.
Officer Commanding 9 Malaria Field Laboratory.

1631

In the Field.
21 Jul. 44.

Copies to:- DMS. AAI. 2.
ADMS. Ufficio Sanitaria C.L.I.
Lieut. Mazzarella Italian Liaison 2 Polish Corps;
War Diary. 2
File 1.

Subject: Prophylaxis Prophylaxis

Army Sub Commission, A.C.C.
Main H.Q. (MMIA)
ROME
M/24/1632
24 May 44

Ministry of War, Direzione Generale di San. Mil.

Copy to: S.M.R.E., Sezione Sanita
Office of the Surgeon, RAAC. (ref your
Sec(Sr) 302/3 of 17 July 44)

The Rome Allied Area Command has been declared a "mepacrine area".

Please ensure that all Italian troops in this area receive mepacrine prophylaxis.

Major,
R.A.D.C.
Army Sub Commission, ACC.

/23G.

File

1630

ROME ALLIED AREA COMMAND
OFFICE OF THE SURGEON.
A.F.O.794 U.S.ARMY.

Med 2817

Reference :- Med (Br) 300/8

JD/jrb.
22 July '44.

SUBJECT :- Malaria Control.

TO :- D.A.D.M.S.,
M.M.I.A.,
A.C.C. Sub Commission.
ROME.

Information has reached this Office that mepacrine supplies are not available for Italian Army Units operating with Allied Troops in this Area.

Since the R.A.A.C. has now been declared a "Mepacrine Area" will you please ensure that Italian Troops in the Area get the prescribed suppressive therapy.

for the SURGEON.

J. DONNELLY,
Major, R.A.M.C.,
D.A.D.H.

M/829/1423

HEADQUARTERS
PENINSULAR BASE SECTION
APO 782

AG 427 BPMED (7 July 44)

DF/PJS/rmf

13 JUL 1944

SUBJECT: Mosquito Bars for Italian Troops.

TO : Headquarters, ACC, Army Subcommission (MMIA), Lequile (Lecce)

1. Information has reached this Headquarters that Italian troops suffering from malaria are being treated in various places, including hospitals, without being protected by mosquito netting.

2. While it is realized that the Italian soldier is not accustomed to the routine prophylactic use of the mosquito bar, it is nevertheless believed to be essential that a patient with malaria be protected from Anopheles mosquitoes by a mosquito bar.

3. Request that sufficient mosquito netting be made available so that all patients being treated for malaria are protected with mosquito netting. It is estimated that there are about 500 patients from the 212th Division with malaria in Italian Military Hospitals and an additional 500 from other sources.

4. Request further that mosquito netting be provided for Italian troops in highly malarious areas, and that they be educated to their use.

For the Commanding Officer:

L. F. NICKEL,
Lt Colonel, A. G. D.,
Adjutant General

1628

Subject: Issue of Mepacrine - Italian Armed Forces

Army Sub Commission, A.C.C.
Main H.Q. (MMIA)
ROME
M/SA/141A
22. July 44

C.C.
Command Medical Store

Copy: Ministry of War, Direzione Sanita. (For information. The balance of 9,000,000 is being supplied in 3 monthly issues of 3,000,000)

Reference HQ AMI letter 4039 of 20 July 44.

1. Please arrange to issue the monthly 3,000,000 mepacrines direct to Italian Medical Store Naples.

2. A copy of the notice to collect should be forwarded to this office.

Major,
D.A.D.M.S.
Army Sub Commission, ACC.

/RBG

1627

Subject:- Mepacrines - Italian Armed Forces.

Ref. 319.
4039 M.

20 Jul 44.

O.C., 'A' Command Depot of Medical Stores.

Copy to:- ADC, ADC, Main HQ (AMIA), Lequile(Lecce).
(for attention of D.A.D.M.S.).
File 4011 M.

With reference to the question of issue of 10 million Tablets Mepacrine to the Italian Armed Forces.

1. It is noted that 1 million tablets have already been issued.

2. Will you please arrange for the balance of 9 million tablets to be issued at the rate of 3 million tablets per month commencing at the end of July 44.

(F.J.BOWERS),
Staff Captain,
for Major-General,
D.M.S., A.A.I.

FJB/CSJ

W.G.H. 21/7

H. Cooper. — from Vanzetti to collect.

M/29/1468
1626

2A

Subject: Mepacrine - Italian Armed Forces.

Army Subcommission, ACC.
(AT NAPLES).

M/4 28 May 44.

MGS., AAI.,

Reference conversation Col. Chalke- Major Hoggie on 27th May.

Amount of Mepacrine equivalents held in Italian Depots 9000000

Available for propylaxis 7000000

Since issued from Allied sources:-

21st April	Mepacrine	2100000
2nd May	"	3500000
11th May	Atebrin (German)	3700000
total available for propylaxis		16300000

Distributed by Italian services

To Sardinia 4000000	Italchina & 2100000 Mep.	6100000
To Sicily	Mepacrine	1000000
To Calabria	"	1000000
To Italian Navy	"	500000
To Italian Air Force	Italchina	25000
		8625000

Other supplies have been made locally
(details not available)

1625

Supplies to combat troops in 5th and 8th Armies are made with the r rations which are drawn through Allied D.I.Ds. (AAI signal A/Q refers date not available in our Naples office)

Orders have been issued by DMS (Col Ferri) for issues to be made to Italian troops in Campania if in Malarious areas

U S R E S T R I C T E D Equals British R E S T R I C T E D

M.M.I.A.

To DADMS
for info & retention

HEADQUARTERS
2675TH REGIMENT
ALLIED CONTROL COMMISSION
(PROVISIONAL)
APO 394

12 May 1944

CIRCULAR)
:
NUMBER 5)

MALARIA CONTROL

1. In accordance with Peninsular Base Section directives, (See PBS Circulars #33 of 2 March 1944 and #53 of 30 April 1944), personnel of the 2675th Regiment will be governed by the following regulations as regards atabrine suppressive treatment beginning 1 May 1944:

a. Personnel who will not take atabrine: Those permanently located in an area bounded on the south by the Gulf of Naples and on the north by a line from Pozzuoli (10.0-46.7) to Trentola (15.0-64.0) to Aversa (17.5-64.0) to Frattamaggiore (23.5-60.0) and to the Gulf of Naples through Portici (28.4-46.0).

b. Personnel who will take atabrine:

(1) All personnel outside the zone described in a, above.

(2) Personnel, even though living in the zone described above, who have duties which routinely take them out of the area during the hours of darkness. This applies to many officers and men at Headquarters, Allied Control Commission who travel out of the Naples Area.

c. Method of Administration:

(1) Dosage. One tablet* (0.1 gram) daily, preferably at the evening meal, with a cupful of liquid.

(2) Supervision. The administration will be supervised by an officer or NCO when possible who will personally see that the drug is taken "on the spot".

(3) Sensitivity. Individuals found to be truly sensitive to atabrine may take in lieu thereof (0.6 gram) 10 grains quinine daily. This will be done upon written consent of the unit medical officer, who will critically estimate individual cases after a trial period on divided doses.

2. The following individual protective measures will be carried out by all personnel:

1624

Cir #5 (12 May 44)
Hq 2675th Regt ACC, (Cont'd)

a. Mosquito Bars. Sleeping under bednets will be required by all personnel. Nets are now available for all personnel. Mosquito nets will be properly adjusted and regularly inspected for tears.

b. Repellent will be applied to all exposed portions of the body by all personnel at sundown and will be repeated at 3-hour intervals until bedtime. Repellent containing Indalone (See label on bottle) should be applied at one-hour intervals.

c. Leggins will be worn by all sentries on duty at night and by all personnel outside of Metropolitan Area, Naples, whose duties require them to be outside of a screened tent or building after nightfall.

d. Sleeves will be rolled down and buttoned at night.

e. Spray killing of adult mosquitoes will be done in all sleeping quarters at dusk and before bedtime. Except in towns and villages, all civilian habitations, farmhouses, and stables within a one mile radius of each unit bivouac will be sprayed weekly with insecticide to eliminate infected adult mosquitoes.

(*Note: During the first week, one-half tablet (0.05 gram) will be taken daily.)

By order of Colonel PARKIN:

R. T. UHLER
Lt Col, AGD
Executive Officer

OFFICIAL:

F. R. Vermuth

F. R. VERMUTH
WOJG, USA
Asst Adjutant

(pf)
DISTRIBUTION: "X"

COPY to Col. Russell for info - from P.H. (Rear)

Subject: - Malaria Cont 1.

Army Sub Commission A.C.C.
Main H.Q. (A.M.I.A.)
LECCE (LECCE)
M/2A/776

1st May 44

Director of Public Health Sub Comm.ACC.

Copy to: - DDMS HQ AAI
"Q"

Reference para 3 (b) of HQ ACC/35/CA Memorandum No 54 April 44.

1. It is felt that the co-ordination and control of anti-malarial measures could with mutual advantage be extended to include the Italian Army. Lt. Col. Piazza, at the Medical Directorate, Italian Ministry of War is in charge of malarial control and much useful information on malarious areas, particularly Sardinia, is available.

2. Officers of the Malarial Control Branch are welcome to stay at this H.Q. while visiting the Italian Medical Authorities.

Major, R.A.M.S.
D.A.D.M.S.
Army Sub Commission, ACC.

/FEG

1623

Well
M/2A/947
AA Seen KB/5 file

Subject: Malaria - Italian Army

Army Sub Commission, A.C.C.
Main H.Q. (M.M.I.A.)
ENQUIRE (ASCCS)
M/2A/895
14 May 44

DMS
HQ AAI

Copy to: DDMS No 1 District
"Q"

1. AAI (Adm Sch) signal Q(AF)25478 of 25 March 44 gave a ruling that no mosquito nets would be provided for the Italian Armed Forces. Mosquito nets were never at any time previously used by Italian personnel.

2. A verbal request for 500 mosquito nets for malaria infected patients in hospital was made by DDMS No 1 District to Col PIDSLEY during a recent visit to Sicily. Col Pidsley is the AFHQ representative temporarily attached to this Sub Commission and is engaged in setting up the permanent supply and accounting arrangements for Italian Armed Forces.

3. A medical opinion whether such provision is considered necessary has been requested. If this policy is adopted, all Italian Military hospitals in malarious areas it will probable involve provision of 4,000 - 5,000 mosquito nets.

4. Your opinion on this subject is requested.

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4. Your opinion on this subject is requested.

W. C. Heggie

Major, R.A.M.C.
D.A.D.G.
Army Sub Commission, ACC.

/RDG

COPY

HEADQUARTERS
ALLIED CONTROL COMMISSION
R.C. & M.G. Section
APO 394

Ref /231/25/CA

25 April 1944

EXECUTIVE MEMORANDUM)

NUMBER 54)

MALARIA CONTROL

1. Prevention of Malaria in this theatre is of fundamental importance to Allied Forces. Experiences of 1943 in Sicily and the notorious history of areas now occupied or which lie immediately ahead, indicate clearly that the Armies will sustain serious loss of manpower if malaria is not effectively controlled. All signs point to a season of unusually high density of malaria mosquitos and of civilian carriers of the parasite - the two main factors in the transmission of malaria.

2. Protection of armed forces from malaria involves both intra and extra-contonment control programmes. Army regulations, whether British, French, or American, clearly make it the duty of commanding officers of units, great or small, to take adequate steps for protection against malaria. Within and immediately around a military installation malaria prophylaxis is definitely a command function. In many areas there are civil malaria control problems contiguous to military camps. Allied Control Commission will provide as much assistance as possible to all cases where civilian malaria or malariogenic conditions are a menace to Allied Military encampments.

3. A Malaria Control Branch has been established in the Public Health Sub Commission of Allied Control Commission. It has the following functions:

(a) To assist the Army Senior Civil Affairs Officers and Regional Commissioners of Allied Control Commission in restoring and implementing civilian malaria control agencies, and in directing their activities.

(b) To assist in co-ordinating civil and military malaria control activities.

(c) To carry out essential malaria control field tests in cooperation with the Allied Forces.

4. The Malaria Control Branch is located in Room 5, Regie Poste Building, NAPLES. Mail should be addressed to H.Q. Allied Control Commission, Public Health Sub Commission, Malaria Control Branch, APO 394. The staff of the Branch is as follows:

Chief Colonel

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4. The Malaria Control Branch is located in Room 5, Regie Poste Building, NAPLES. Mail should be addressed to H.Q. Allied Control Commission, Public Health Sub Commission, Malaria Control Branch, APO 394. The staff of the Branch is as follows:

Chief	Colonel Paul F. Russell, MC
Medical Officer	Captain V.F. Tuzio, MC
Malaria Engineer	Captain T.D. Anderson, Sn.C.
Entomologist	1st Lieut. M.A. Manzelli, Sn.C.

1621

5. Direct communication on matters pertaining to malaria control is authorised between the Chief of the Malaria Control Branch, Regional Public Health Officers, and Deputy Directors of Public Health, AMG 5th and 8th Armies.

6. Regional and Army Public Health Officers, Allied Control Commission will send to the Chief, Malaria Control Branch, on the first of each month, beginning 1 May 1944, a brief report listing location, type, and budget of local civilian malaria control work in progress, equipment, supply labour, and transportation conditions, spleen or parasite surveys, malaria incidence figures; and any pertinent comments on the malaria situation. Sketch and spot maps should be included when feasible. The first report should list active Comitato Provinciale Antimalarico, giving names and official titles of the members.

/2...

7. In each province where there is a malaria problem there will usually be found a Comitato Provinciale Antimalarico. If this committee has been dispersed, it should be reconstituted as soon as possible. The malaria committee should be advised that, if it has not already done so, it should immediately prepare malaria control plans and budgets along the general lines of preceding years. In Regions I, II, VI and VII these malaria control budgets will be submitted (through High Commissioners Sicily and Sardinia in Regions I, and VI respectively) to the finance office of the Provincial Government for approval. Thence the approved budgets should be forwarded to the Minister of the Interior of the Italian Government. When approved by the Minister of the Interior, funds will be remitted to the Provincial Office. In Regions III, IV and V approved budgets will be forwarded from the provincial finance office to the Regional Finance Officer, Allied Control Commission, who, if he approves will establish credits at the provincial Banca d'Italia. Since the malaria season has already begun, prompt consideration will be given to such plans and budget proposals.

8. So far as Allied Control Commission supplies are concerned, malaria control will be based on drainage, maintenance of drainage canals, canalizing of streams, regulation of water, filling, oiling, and the proper treatment of clinical cases. Excepting as civilian supplies are available from last year's stocks, no Paris Green is obtainable by Allied Control Commission for the control of civil malaria. Oil in reasonable amounts is available for larviciding. Sprayers for oil are in limited supply but brush oiling may be substituted for spraying in most cases, if necessary. Considerable ingenuity will be required in regard to transport where motor vehicles are not available on requisition. Full use must be made of mules, horses, donkeys and oxen. In many cases workers will have to walk to and from their work. Where vehicles are available but there is a lack of gasoline, applications for gasoline will be favourably considered. Where the work is directly associated with military installations it may be possible to obtain transport assistance from the Commanding Officers.

9. Upon approval of plans and budgets, it is possible to obtain oil from the nearest agency of the Comitato Italiano Petroli on requisitions approved by the Provincial Officer or G.A.O.+ Transport will have to be provided by the Comitato Provinciale Antimalarico or the local requisitioning agency. The Medical Supply Branch, Allied Control Commission will send to each Regional Headquarters the provincial quota of sprayers. These may be obtained by the local malaria control agency from Regional Headquarters, Allied Control Commission.

10. Quinine is not available to Allied Control Commission for distribution but supplies of atebrine/mepacrine for therapeutic use have been provided. Each Regional Public Health Officer, Allied Control Commission, will requisition from the Medical Supply Branch, Public Health Sub Commission, Allied Control Commission, the amount of atebrine/mepacrine required by his regional provinces. The Supply Branch will send the desired amount to the Regional Headquarters from which provinvial distribution will be made to the local malaria committee on requisition.

Due to the inadequate supply, suppresaive prophylactic use of atebrine/mepacrine can not be recommended for civilians. Every effort should be made (a) to facilitate distribution of atebrine/mepacrine to civil agencies for treatment of

9. Upon approval of [illegible] nearest agency of the Comitato Italiano Petroli di [illegible] Provincial Officer or C.A.O.+ Transport will have to be provided by the Comitato Provinciale Antimalarico or the local requisitioning agency. The Medical Supply Branch, Allied Control Commission will send to each Regional Headquarters the provincial quota of sprayers. These may be obtained by the local malaria control agency from Regional Headquarters, Allied Control Commission.

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Due to the inadequate supply, suppressive prophylactic use of atebrine/mepacrine can not be recommended for civilians. Every effort should be made (a) to facilitate distribution of atebrine/mepacrine to civil agencies for treatment of malaria, and (b) to check prophylactic use of atebrine/mepacrine among civilians unless they are engaged in operational war work or have been ordered by military authority to take it. In the latter case atebrine/mepacrine will be supplied from military sources.

11. Finally the importance of malaria control is again stressed. It is a general administrative problem in which every Officer in the Region must play his part. Regional Commissioners, Provincial Commissioners, and all Allied Control Commission Health Officers must dom everything in their power to stimulate and facilitate civilian malaria control programmes. The highest priority will be given to work in the vicinity of Allied Military installations.

(signed) M.S. LUSH,
Brigadier,
Executive Commissioner.

TRANSLATION

MINISTERO DELLA GUERRA
Direzione Generale di Sanità Militare

Subject: Anti-Malaria Campaign
To: ALL MEDICAL UNITS - ITALIAN ARMY

Ref: 4/620/I.S.
16.3.44

To: M.M.I.A. (for information)

Further to our 206/San of 4 Feb 44, please note that we have indented with Allies for the quantities of medicines and material required, to meet the demands entailed by this year's anti-malarial campaign.

Since the pre-epidemic treatment of military suffering from endemic malaria should commence on April 1st., the Health Depts. listed above are requested to issue to all units under the instruction detailed below, in order that the campaign may start just as soon as the adequate medical supplies are received.

It is a well known fact that, as far as Units stationed in Southern and Insular Italy are concerned, pre-epidemic period is deemed to be the whole of the month of April, since, subject to issue of adequate supplies, normal prevention treatment of all military stationed in malarious districts should commence on May 1st.

The following is the procedure to be followed for treatment of men suffering from endemic malaria during the period 1st to 30th April:-

Issue during two consecutive days of the week (Saturday and Sunday for example) of 4 quinine tablets per day (equal to 80 centigrams) plus 3 daily tablets of certuna (equal to 60 centigrams) or in lieu of certuna, 2 daily tablets of gamefar (equal to 2 centigrams) or 2 daily tablets of plasmoquin (equal to 2 centigrams)

Issue of such preventive products will take place at meal times and in the presence, and checked by an Officer. They will be issued as follows:-

1st Meal: 2 quinine tablets and 2 certuna tablets (or in lieu of the 2 certuna tablets, one of gamefar or one of plasmoquin).

2nd Meal: 2 quinine tablets, plus one of certuna (or in lieu of the certuna, one tablet of gamefar or one of plasmoquin).

Consequently, during the four weeks treatment, each man should have been issued with; 32 quinine tablets
plus 24 certuna tablets (ot 16 gamefar or 16 plasmoquin)

Foreseeing the possibility that the Allies may have to reduce the quantity of medicines applied for, treatment will be given only to malaria patients of the last two years or those showing evident symptoms of the disease in our endemic progression.

The Health Depts. listed above will therefore proceed to issue orders at once, in order that all Units under their control will, without delay, carry out a strict medical inspection, with a view to selecting the patients that should be treated under this order, advising this office of their numbers.

We must stress the fact that, in view of an unavoidable limitation of

issue during two consecutive days of the week (Saturday and Sunday for example) of 4 quinine tablets per day (equal to 80 centigrams) plus 3 daily tablets of certuna (equal to 60 centigrams) or in lieu of certuna, 2 daily tablets of gamefar (equal to 2 centigrams) or 2 daily tablets of plasmoquin (equal to 2 centigrams)

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The Health Depts. listed above will therefore proceed to issue orders at once, in order that all Units under their control will, without delay, carry out a strict medical inspection, with a view to selecting the patients that should be treated under this order, advising this office of their numbers.

We must stress the fact that, in view of an unavoidable limitation of supplies, census of men to be treated must be carried out most carefully, studying present condition of patients of the last two years and not on the basis of information supplied by the patients themselves (which might be biassed or inexact) or on the basis of existing medical reports.

1619

The date on which the pre-epidemic treatment should commence, will be duly announced by this Directorate General, since it is subject to whether the Allies can supply the required material in time and sufficient quantity.

Technical prodedure for normal treatment during the malaria period 1st May to 15th November, will be issued in due course.

Report action taken.

(sgd) F. Caldarola
IL DIRETTORE GENERALE

File / M2A.

Subject: Treatment of Malaria

Army Sub Commission, A.C.C.
Main H.Q. (M.M.I.A.)
LEQUILE (LECCE)
M/2/577
29 March 44

DMSS.,
A.A.I. (Adm Eoh) 2 copies.

1. The attached translation of an Italian method of treating certain malaria cases is forwarded for your information.

2. Authority for release of 100 grammes crystalline adrenaline is requested.

Major, R.A.M.C.
D.A.D.M.S.
Army Sub Commission, ACC.

/HBG

Enclosure as File

TRANSLATION

MINISTERO DELLA GUERRA
Direzione Generale di Sanita Militare

Subject: Treatment of Malaria - intravenous adrenaline

Ref: 4/736/I.3.
25.3.44

To: M.M.I.A.

Large scale experiments and treatments have taken place in Italy, during the last few years, even among Military Units, with intravenous adrenaline for the cure of acute cases of malaria, chronic malaria, and cases of malarial relapses.

This treatment is given by means of daily intravenous injections, starting with a minimum dose and increasing progressively over a period of about a month, the doses ranging from 1/100 to 1/10 of a milligram.

With this treatment it is possible to reduce the dosage of quinine, malarial "splenomegalia" totally or partly disappears and above all, it gives the individual an extraordinary resistance against relapses or re-infections (a complete and lasting cure).

Bearing in mind the so far excellent results constantly obtained from this treatment, this Dept. has decided to apply it to malaria infected military. It would be necessary, though, to obtain a suitable quantity of synthetic crystalline adrenaline.

Would you please therefore, endeavour to obtain for an issue of 100 grammes of crystalised adrenaline which would suffice for the treatment of 30,000 patients.

Should the Allied Medical Authorities be interested in studying this treatmentin practice and observe results obtained, they may approach the Director of the Medical Clinic of the Royal Palermo University, where this treatment is today being applied in a specialised unit.

Should the adrenaline applied for, be granted, we will arrange for its preparation in phials in a stable solution ready for use, at the Pharmaceutical Establishments in Naples.

(sgd) V. POLOSA
IL COLONNELLO MEDICO

of 100 grammes of crystalised adrenaline which would suffice for the treatment of 50,000 patients.

Should the Allied Medical Authorities be interested in studying this treatmentin practice and observe results obtained, they may approach the Director of the Medical Clinic of the Royal Palermo University, where this treatment is today being applied in a specialised unit.

Should the adrenaline applied for, be granted, we will arrange for its preparation in phials in a stable solution ready for use, at the Pharmaceutical Establishments in Naples.

(sgd) V. POLOSA
IL COLONNELLO MEDICO

1617

Subject:- Malaria - Sardinia.

Army Sub Commission, A.C.C.,
Near H.Q. (M.M.I.A.).
LEGHORN, (LEGNE).
M/2/361.
11 Feb. 44.

D.D.M.S., A.F.H.Q., Adv. Adm. Echn. (2 copies)

Copy to:- D.D.M.S., 2 District.

Herewith Report on Malarial situation in Sardinia.

Italian Ministry of War have been asked to submit a definite demand for amounts of stores required as per para. 10. A certificate has also been requested to the effect that these stores are not available from Italian sources.

Brig.
Army Sub Comm. ACC.

AMAD.

Circulate - File -

TRANSLATION.

MINISTERO DELLA GUERRA.
Direzione Generale Sanita Militare.

Ref.:- 231/San. di prot. 8th. February 44.

Subject :- Anti Malaria Campaign - SARDINIA.

1. We received a report from the Military Intendenza in Sardinia on Malaria amongst Italian Troops on the island. The present situation and the needs resulting from it. The report adds that during the last four years 150,000 soldiers were affected by Malaria.

2. In 1943 there were 50,000 fresh cases with 238 Malignant cases.

3. The incidence of the disease is increased by the state of drainage works at present abandoned, by the dispersion of population from bombed towns and by the arrival of soldiers from the mainland who are easily infected, not being accustomed to the weather.

4. Malaria caused in some units, a reduction of 70 to 80 and even 100% in strength.

5. The hospital organisation cannot cover the requirements during the season of new infections. Too many patients having to be treated, the period of treatment is shortened.

6. Quinine salts available cannot cover the requirements and are only used for therapeutic purposes and not as prophylactic measures.

7. We intend to dispatch to Sardinia a large supply of "ACRIDINICI" which are in stock in the Italian Medical Stores.

8. There is a shortage of drugs (plasmochina, Gamefar, etc.) and we shall have to apply to Allied sources for same.

9. The S.M.R.E. will be asked that troops during the Malaria season 6 be transferred to the mountains or to areas where the infection is less prevalent.

10. We require an urgent supply from Allied sources of kerosene, Paris Green, sieves, mixers, and pumps which are necessary to increase the anti larva destruction.

11. Only with the above measures will it be possible, at least we

period of treatment is shortened.

6. Quinine salts available cannot cover the requirements and are only used for therapeutic purposes and not as prophylactic measures.

7. We intend to dispatch to Sardinia a large supply of "ACRIDINICI" which are in stock in the Italian Medical Stores.

8. There is a shortage of drugs (plasmochina, Camofar, etc.) and we shall have to apply to Allied sources for same.

9. The S.M.R.E. will be asked that troops during the Malaria 6 season be transferred to the mountains or to areas where the infection is less prevalent.

10. We require an urgent supply from Allied sources of kerosene, Paris Green, sieves, mixers, and pumps which are necessary to increase the anti larva destruction.

11. Only with the above measures will it be possible, at least we hope so, to restrict the Malaria infection, and avoid a fall in the strength of units.

1615

IL MAGGIORE MEDICO

/s/ F. Calderola.

Received from STATO MAGGIORE R. ESERCITO - UFFICIO MED. II SEZIONE SANITA.

REPORT ON THE PREVENTION OF DISEASE IN THE ITALIAN ARMY.

The fight against Malaria in the Italian Army is based on three cardinal principles - Prevention - Discharge from the Army of chronic cases - Curative treatment of fresh and relapse cases first in Hospitals and later in Convalescent Depots. When the general situation of the country permitted, all known measures capable of operation and most efficacious for treatment as above were adopted to prevent re-infection and spreading to other men.

The principal rules for prevention of malaria are as follows:-

(1) Propaganda - In normal times, and especially on the occasion of mobilisation of all classes, conferences were held in the various Corps to make known ("presumably to the men") the dangers of malaria, its epidemiology, the main characteristics of the mosquito, and the most suitable means of protection and prevention of the spread of malaria. These conferences were held by a Malarial Specialists or Corps Medical Officers - sometimes accompanied by cinema shows or diagramatic illustrations.

(2) Training. In the Garrisons or localities where malaria was more abundant, special squads of men were trained on the importance of the mosquitoes in relation to malaria and particularly with the drainage of the ground.

(3) Discipline. It is ordered that, on the arrival of recruits, the Corps Medical Officer makes strict inquiry into previous history, the location of their home province and to clinical examination (specially in regard to splenomegaly in persons from malarial regions) and eventually blood examination. A forecast of malaria cases is made up in order to be able to proceed with treatment which is as follows:-

(4) At the beginning of the malarial season (generally from end of March to the end of May) all soldiers with "diagnosed malaria" come for treatment. They receive 1½ grammes (about 22 grains) of quinine every 5 or 6 days or 40 centigrammes daily; or alternatively a spoonful of Mixture Baccelli (a quinine and iron mixture) daily. This treatment is given in order to treat the disease and at the same time to prevent spreading to other soldiers. The quinine salt in common use is the bisulphate or hydrochloride. All troops who, in their training or transfer, have to traverse or reside in malarious areas and static troops (such as isolated guards or those on ammunition dumps) are given quinine - either a mixture containing 40 centigrammes or 1 to 1½ grammes for two consecutive days of the week (usually Saturday and Sunday)

For the past year, the synthetic products of quinine (Atebrin, Plasmoquine Chinoplasmina etc.,) has been kept for the treatment of men sick with malaria, and for collective prophylaxis a substitute for quinine known as M.5 (iodo sorcurato of manganese and extract of milsa) has given good results although inferior, as a preventative to quinine.

All men are compelled to take the drugs and this is checked by examining the urine with the TAUBER reagent.

5. Personal protection. In all locations in malarial infected areas, doors, windows, and all openings in the soldiers billets are protected by metal gauze. The soldiers, themselves, who for exigencies of the service are stationed permanently in malarious areas, are further protected by gloves, mosquito nets, anti-mosquito oirtment, prepared in small tubes of 100 grammes each.

They also have quinine [illegible]

end of May) all soldiers with "diagnosed malaria" come for treatment. They receive 1½ grammes (about 22 grains) of quinine every 5 or 6 days or 40 centigrammes daily; or alternatively a spoonful of Mistura Baccelli (a quinine and iron mixture) daily. This treatment is given in order to treat the disease and at the same time to prevent spreading to other soldiers. The quinine salt in common use is the bisulphate or hydrochloride. All troops who, in their training or transfer, have to traverse or reside in malarious areas and static troops (such as isolated guards or those on ammunition dumps) are given quinine - either a mixture containing 40 centigrammes or 1 to 1½ grammes for two consecutive days of the week (usually Saturday and Sunday)

For the past year, the synthetic products of quinine (Atebrin, Plasmoquine Chinoplasmina etc.,) has been kept for the treatment of men sick with malaria, and for collective prophylaxis a substitute for quinine known as M.3 (iodo mercurato of manganese and extract of milsa) has given good results although inferior, as a preventative to quinine.

All men are compelled to take the drugs and this is checked by examining the urine with the TANRET reagent.

5. Personal protection. In all locations in malarial infected areas, doors, windows, and all openings in the soldiers billets are protected by metal gauze. The soldiers, themselves, who for exigiencies of the service are stationed permanentely in malarious areas, are further protected by gloves, mosquito nets, anti-mosquito ointment, prepared in small tubes of 100 grammes each.

They also have quinine propqylaxis as described above.

6. Selection of Camp Sites. Permanent barracks are always built in healthy areas, not infested by mosquitoes and in general far away from stagnant or slow running water.

1614

The same procedure is adopted for ordinary camps, except for grave military or tactical reasons. It is the custom to site camps at least 2 or 3 kilometres from infested areas.

7. Destruction of the Adult Mosquito. Regular use of liquid insecticide (FLIT), by means of frequent clearing of garbage and rubbish, by airing during the day the inhabited rooms, by scrupulous cleanliness, especially of the crevices, cul de sacks and living rooms, we endeavour to keep the adult mosquito far away from military sites. Special organisations have not been set up as this is entrusted to the care of the soldiers already doing guard duties in the infected areas.

For the civil population inhabiting infected areas, the Italian Red Cross provided with its own personnel the means for fighting against the anopheles and the larvae. Quinine propylaxis and the cure of malarial cases are also provided.

8. The destruction of Larvae. This is carried out by a series of elementary precautions as laid down for clearing small areas e.g. By ensuring the normal flow of water in the aqueducts and drains by maximum cleanliness; and wherever possible - by completely covering these water channels; - by care to avoid the

(by care to avoid the -

slightest collection of stagnant water; by filling in small ditches in which rain water could collect; by removal of mud and sludge from these collections.

The collections of water which it is not possible to drain, or to cover with paraffin oil (because of the cost) are covered with a mixture or road dust and "Paris Green". This is repeated every 15 - 20 days throughout the malarial season.

We have also tried to put in the ponds etc., fish known as "Garbusia" but the method was not very successful because of the wide expanse of water.

9. The control of Malaria entrusted to Corps Medical Officers and staffs of General Hospitals are :-

Diagnosis and treatment of malaria cases; collective and personal protection; isolation and treatment in specially adapted sections of the hospitals; care of patients in appointed convalescent depots; by carrying out local small scale drainage operations by military personnel; by rendering returns showing new and recurrent cases of malaria. These are the main points on which the fight against malaria is based in the Italian Army.

10. We do not know exactly in what way the Italian organisation differs from the German.

1613