British Medical Association Sixty-eighth Annual Meeting, Section of Tropical Medicine: notes

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89186

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4

in Mosquitoes

Captain James

5 "The Hot Weather Diarrhoea of India"

Major Buch

6 Blackwater F

Disease of

89186

1 President's Address

2 "Quinine as a Prophylactic to Malaria"
Dr Andrew Duncan

3 "The Ecology of Filariasis"
Lieut-Col. Maitland

4 "The Metamorphosis of the Filaria in Mosquitoes"
Captain James

5 "The Hot Weather Diarrhoea of India"
Major Buch

6 "Blackwater F

Diseases of G

u are requested to embody the substance of your remarks on this sheet for publication in the JOURNAL, *and then return it to the Secretary of the Section.*

Discussion on Dr.....'s Paper or Discussion.

Date.....

Section of.....

Mr. or Dr.....No.

Malariasis

Papers by Captain James T. M.S.

Lieut Col: Maitland.

Discussion by Dr Manson

Major Ronald Ross -

Dr Rees.

The Hon Walter [illegible] Indian

Major Giles Paper.

42° 47°

ankly – Beri beri. Kala-azar.

Dwo.

dimorphism.

Lorenzo.

Dobson – thinks it did good insignificant 100 or more present without causing illness

thymol produced as many at least doses as of the first

imported labour

Capt Fernside

678 coolies 300 convicts

462. in parasite

What are we to understand.

Prof. Leonard Rogers

colour index

colour is an important factor in Ankylostomiasis

~~[illegible]~~

discussion Lt. Col. Baker. Burmah. Ceylon

ankylos.

Beri-beri sudden death & workers have not warning of approaching death otherw-

unlike, chronic deaths for ankylosm

~~Lo~~ Major Ross approves of Giles works

Dr Manson

in West Indies found only lately

efficacy to thymol.

chronic night-soil cement lime

stored months fermented

manipulation of

night soil no ova.

Mr Cantlie. Dr Walker in Borneo.

President no remarks.

Abscess of Liver

Col. Macleod

Management of Lung abscess.

15 G. Open 5 G. ∴ opened through epithelium.

16% per cent when op.

no right to allow liver abscess to reach that stage. must explore.

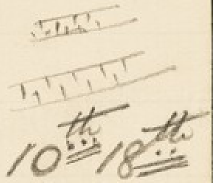
evanescent.

Tagore. w Macleod about seat of operation in severe


Hepatic
Hépatique

no use trying to reach a hepatic abscess when ruptured upwards.

} 2 cases of liver abscess



empyema shown like liver abscess but microscopically.

Mr. Cantlie

Mr. Johnson Smith.

Surgical Treatment of Liver Abscess

Liver Abscess X. Rontgen rays.

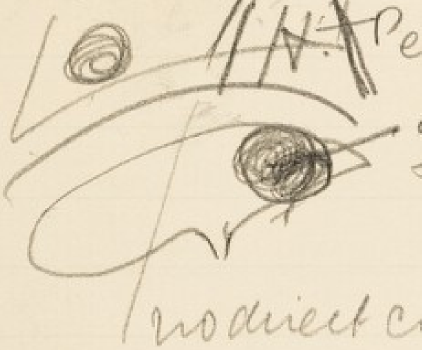
R ½ of diaphragm does not move

Dr. <u>Bassett-Smith</u> hepatic abscess.
man not abroad for 2 years. Indications which
came after dysentery. to amoeba. in dysentery

Rev 1 Kartulis. active outflowing of capillaries
& curves of

2 Kruse & Pasquale.

3 Councilman. Lafleur. abscess action



Pericarditis

<u>abscess in left lobe</u>
Sterile pus

no direct communication.

~~[illegible]~~

<u>Discussion</u>:-

<u>Dr. Manson</u> the difficulty of finding
of pus by exploration.
<u>Blood & pus</u>. resembles ~~[illegible]~~ liver pus.
pus searched for ~~[illegible]~~ not found
but cropped up afterwards

London Lung. too heroic. not the treated as an empyema & removal of rib not necessary. good results by trocar cannula, pleurae not involved.

Plenty drainage through drainage

Amoeba coli best way to discover

Liver abscess stumps lung.

not so. it is not there before been found it

Leucocytosis in liver abscess malarial or not. evidence of inflammatory

Fatal hemorrhage in Bombay not experienced elsewhere

Barnett-Smith paper not complete he can not examine pus in lung abscess for amoeba coli cannot say if direct ~~contra~~ connected with

Ross Leucocythemia - in hepatic abscess. in a case abscess in Liverpool not malarial.

Cantlie

Macleod agreed with Dr. Manson
old recurrence in case were operated
on by laparotomy & failed to find
pus. after a few days pus came
through the stomach & died.
Cantlie's diagram. liver alters
circumference
Intercostal fluctuation in case of
liver abscess. widened spaces.
empty gently & fluctuation can
be felt.
Agrees with nonsense of rib removal
biliary calculi in pus removed as
intercostal abscess by small
Never seen necessity for Mikulicz
serous surfaces.
When pleura
When lung attacked then it is necessary
to remove a rib.

Cyprus Shulangi.

Manson remark. analogy plague
Cantlie. Cantlie

Ross's paper on

[redacted] Mulluck spoke ~~[illegible]~~ of necessity of creating enthusiasm in research by special teachers

Mudead. Teaching & Research different things associated in same thing. V. Carter D. Cunningham combines teaching & research

Hutchinson on Yaws
is it syphilis
Africa. contracted yaws. marks
in wrist. scars + seen in W. Coast
by men who knew yaws. ~~[illegible]~~
Liverpool man saw him lieutenant
now has marks on hands
over wrist. legs. thighs & hips.
has malaria.
palm of hand looked like characteristic yaws
has syphilitic eruption.
mushroom growth at original sore
tender
plantar & palmar psoriasis
mixed when seen first.

2nd case
Surgeon pricked finger whilst scraping a yaw. Inoculated finger. Cured

1st patient covered when seen first healing by specific treatment. wants to know if this is now an ordinary case of syphilis

Syphilitic infection not confessed or believed.
throat never sore in Yaws
in syph. when skin bad. mucous membr. throat &c. not so marked
Yaws:- is nothing but the present of syph: we imported from African coast (not American). also from West Indies. history of develop too rapid after Columbus discovery.
Litterat. extensive impartial & partial no two writers agree quite.
2 cases before spoken of the earliest cases ever seen in Europe.

the tertiary stage of this seen.
Experiments:— ~~[illegible]~~ thanks helpers
Arthur Powell (Indian) sent many reports. Opposite views he holds
Dr. Daniels. (Fiji & Africa)
Sir Wm. Kynsey. book of drawings
does not believe ~~[illegible] Yaws~~ Yaws is syphilis.
Mr. K. drawings seem to prove that it is syph. primary. secondary & tertiary stage.
reprobation of a
Dr. Nichols. Dominica. summarised beliefs. denies Yaws has a primary sore. begins as a primary sore.
Inoculat. many patients · ~~[illegible]~~ sores glands. Eruption 3 months afterwards. like syph. The primary sore was made with a mixed secretion containing pus cells &c.
14 days after came the sore inflamm granulomatous &c.

no record beyond
Jaws some writers says no tertiary
symptoms. Keppsey photos shows.
secondary.
In Fiji (Daniels) no syph: hence
Jaws early. (like measles) (intercourse free with Sailors)
(Since saw when Jaws prevail there
is syphilis. identical in Fiji to elsewhere.
~~[illegible]~~ Framboesia.
~~[illegible]~~)
are there tertiary symptoms here when
Jaws are only (Fiji). ~~[illegible]~~ The tradition
is that in Fiji they are liable to some
disease, that is no doubt syph:
Lupoid (or tubercular) disease common. similar like syph:
Serpig in ? forms of syph.
∴ in Fiji tertiary sympt. of Jaws
phagadenic creeping ulceration of genitals.
Common in men & women in Fiji
not syph: a result of Jaws. thinks
Daniels. Hutchinson thinks they
are 3:ᵈ a 4ᵗʰ: tertiary symptoms
In Fiji syph cannot take place

~~and~~ no sailors come home with syph. & not with Yaws. this applies to all cases where Yaws exist.
The substitution of one disease for the other. Those who record abundance of Yaws state syph. not so few & vice versa.
this is in all probability one disease.
<u>Kynsey</u>. has given other facts. In the towns syph & in the country <u>Yaws</u>.
this is probably the same - the differences Hutch. thinks a difference in degree
as measles & German measles parallel if district
Stowers [illegible] (p[illegible]) of negro. with Yaws & syph. no difference.
Hutchinson. does not believe [illegible] Michaels varieties of syph. & holds that Yaws & syph. are one but if they are separate specific disease running parallel course.
If so. we ought to have them

in England. if different why do sailors not get Yaws but syph.
Cannot understand men living in the tropics still believe them
A. Powell describes in India of a little outbreak occurring in a community like syph.
Gibbens in Scotland & epidemics in Ireland frambesia likely yaws.
in Cromwell's army Scotland frambesia appeared
epidemics in England cannot be due to a specific that died out.
Dublin pract a number of cases. Hosp. being. in a case he called morula. occurred in young men & 1. woman a frambesial eruption curable by mercury. Hutch. thinks no careful examination
a London man told a man believed not syph. but frambesia
Hutch. saw man & cured him with Hg.

6 cases Hill

Yaws no hereditary
A. Powell says so
same says not in infancy.
Hubch says plenty some mother
had yaws & infant at but
months had yaws.
2nd Case by Powell mention
Case in which they had it
together soon after birth.
Finer prodrants of both hands.
Review in Polyclinic by Hubch. of Nichols
last work

Macleod says disease first.
1st the case.
2nd Paper.

Dr. Davies. (Samoa) 30 years there.
was in Fiji & Samoa. Himself &
his colleague never saw syph. but
they have yaws in children
they think it healthy & unless they
have yaws would not life.

Sailors cannot get from children.
Yaws not in Ellis[?] & Knights [?] from
until Samoans went there
Davis will have nothing else
but calomel. 9 doses at intervals
takes yaws away. They a brown
& Dark race in Polynesian.
Fijians colonies in Samoa & inter-
course: brought it from Fiji
Dr. Manson,
I think Hutch. views open to
discussion. This case of yaws he
shows depends much on testimony
of others. He cannot be sure
of things of others a history.
He refers to a case of Surgeon
Manson saw him & believed
he has wounded himself whilst
operating on a syph. case.
On general grounds Manson
opposes Hutch. theory. Hutch thinks
it must be syph. because it
resembles it. then he might say

Tubercle lepros. - Yaws. leshia
~~[illegible]~~ are syph.
It is strange if yaws be a dimin
or variety of syph. that
inoculat: by yaws will
not prevent syph. Cases have
had yaws & then syph. or syph &
then yaws. ∴ not protective
- Hutch. says yaws not got by
sailors. Neumann says if
yaws & syph same then are
might to get transition stages
the demarcation is too abrupt.
- He asks Hutch. where would
be placed Verruga peru
is the same.
- Ceylon disease called Parangi
were & various syph. Framboesia.
- Experiment Yaws chancre are yaws.
syph - syph.
The Louis mixed infection.
- Yaws not here because at
high atmosph temperature. It can

Nose & skin lesions more.
Some early worms will not like in this country.
Town cases. Country cases. local condition may explain. Immoral in town. virtue in country.
Mr. Rees in Africa. in Cape Colony
saw syph + yaws. in Hinterland saw nothing but yaws.
after a time intercourse with Court opened & syph came in + natives called it a new disease. always in children.
Macleod thinks case was ~~Yaws~~ syphilitic. ~~Yaws may have been there~~ unanimous. Opinion by vote
Primary sore single. ~~an in vaccin~~
tertiary infection in Fiji - serpigin on ulceration. (Daniels) also in B Guiana)
Macleod described in India - as malignant. not cured by Kg. must be cut out & kills the ~~[illegible]~~ patient

Primary sore not found an in vaccine

by exhaustion & extent
Hosé's differentiation syph. & yaws bacillus

Mr. Hutch. reply
from photos could not tell
one from other by photos.
tertiary syph & tertiary stage
of Yaws the same
~~He~~
The case seen by Manson & myself
of the world the same believed a
rash being eruption on foot
& he has a photo. &
Yaws becomes syph in temp.
He believes it is high temp. that
causes so much granuloma.
in tropics.
Yaws does occur in localities here

Mr S ~~[illegible]~~ Sharlot. experiment
the primary sore of yaws – became yaws.
but they are syph.

when no sore the glands may be ~~the~~ their limit rid judge to sore

Yaws does not protect. fr. syph.

Patients say

Shurloe. inoculated a ~~old~~ ^unmitigated^ Yaws case with syph. of one syph. but 4 years had elapsed between Yaws & syph. i.e. a re-inoculation

Generally believed syph not inoculated a second time. but it does may come again in a year or two

~~Dr.~~ Peruvian Velingas. not related as suggested by Manson.

Protection strong probable the Yaws of young protects adults against syph.

But syph. has been observed in a short time after yaws.

(clinically):

Hutch. thinks plenty ~~conn~~ connected links between the two

Yaws. not monomorphously polymorphous

never in adult. Dr. Davis says many cases reported usually in children

Chancres on skin very difficult. Williamson. thumb pricked w needle same syph. + no, a but little local sore. a surgeon ~~for~~ cutting hand seldom has a local sore

Tomme County. (Kingsey)

Cases by skin in non-venereal way i.e. accidental contagion + not sexual as in syph.

Dr. Mullick paper read ~~[illegible]~~ read.

Dr. Phineas Abraham showed cases of Leprosy + Lichen Scrofulosorum

Leach 10-9

British Medical Association
Section - Tropical Diseases.
President, Colonel Kenneth
Macleod ~~of Inch~~ M.D. L.L.D.
Professor of ~~Pathology~~ Medicine
Army Medical School, Netley,
in the Chair.

Presidential address.

See British Medical
Journal Sept.

Quinine & its action & value

A. "The Action & Modes of Employment of Quinine in Malaria." Dr. Andrew Duncan (Major Ret. I.M.S.) read a paper upon this subject and opened a discussion upon the use of Quinine as a prophylactic & as a curative agent. In the hands of French physicians Quinine is found to be of some prophylactic value in the milder forms of malarial fever, but in pernicious & severer cases it is well nigh useless. The general conclusions arrived at by Russian & Austrian military Surgeons are that quinine has but little if any value as a prophylactic. In America Dr. Bryan states that cinchona preparations have a markedly prophylactic action

Barrett 95

Relate Surgeon Major Parke of the Stanley expedition in Search

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of Livingstone, gave the Officers 4 grains of Quinine daily, before entering the mouth of the Congo (for 10 days). During the ~~a former~~ a subsequent journey of 350 miles through the most unhealthy regions of the world ~~only~~ 2 Officers contracted fever. Dr. Duncan's own experiences in India afford support to the belief that the giving Quinine is a preventive to malaria: in 1896 of 50 men of the 2nd Goorkha Rifles who took 3 grains Quinine daily none had fever, whereas amongst the men who took no drugs 6·5 per cent had malaria; in 1897 the same experiment was tried again when the results were no malaria ~~in the latter~~ amongst the Quinine takers & 9·8 per cent amongst the non-Quinine takers. During the Malay war the Prophylactic benefits of Quinine were not marked. 6

West African experiences are varied. Harvey found that the sailors who took quinine had as much fever as the men who did not take it. During the Ashanti wars of 1873 & 1896 quinine as a prophylactic proved of no benefit. An enquiry in connection with this subject was promoted by Mr. Chamberlain & Dr. Manson in West Africa. The ~~prophylactic~~ benefit of quinine as elicited by this enquiry seems to be pronounced for it is 87.7 per cent of those who used it as prophylactic it was efficacious.

Dr. Duncan then ~~made~~ revealed the action of several reputed anti-malarial drugs. Arsenic as a prophylactic affords conflicting evidence. In Italy it has been modestly successful in India it has proved very disappointing. The most eminently successful experi

work seems to have been made by
Dr. Ralph Leslie in the Congo Free State
where arsenic was administered
during 15 days, every six weeks &
every one who took was rendered
immune to fever. Narcotine seems
of little value as a prophylactic.
As a cure for malarial attacks
Quinine stands by far the best results
only 2.05% failures. Next to Quinine as a curative comes Nim
bark in doses of one drachm thrice
daily - failures 18%. Berberis had
50% failures. Nucomic, Kreat &
Andrjas seem to be unreliable
as either prophylactic or curative
agents.

B. The Prophylactic Issue
of Quinine. a Synopsis of an
experiment on a large Scale
in Indian Jails, by Major.
W. J. Buchanan, I.M.S.
At 6 of the large jails of India
the prophylactic issue of

(3)

Quinine has been tried for
five years past. In some instances
the results have been tested
by control experiments.
At the Nyamensingh jail the
result was "diminished fever"; at
the Rajahmundri jail, one of the
most malarial jails in India,
Quinine as a prophylactic was
useful in those who had not been
previously exposed to malaria;
those who ~~had~~ contracted fever had it more
mildly, the duration was
shorter & the recurrences fewer.
when the drug had been taken
previously as a preventive.
At the Rajshaye jail, Lt.-Col.
French reported strongly in
favour of Quinine as a prophyl-
-actic during 1896 and 1897 but
he changed his opinion in consequence
of the experiences gained during 1898
At the Bankura jail the prophylactic

G

use of Quinine had distinctly beneficial results; at the Hazaribagh Jail, Major Maynard found as his opinion, that Cinchonidine given in 6 grain doses daily was useful as a prophylactic and as a beneficial agent when attacks of fever came on afterwards. Major Buchanan's experience at the Bhagalpur Jail proved negative the quinine taken & those who had not taken the drug being equally affected. Major Buchanan has never seen haemoglobinuria or other evil effects from taking quinine.

C. The administration of Quinine with Special reference to the Practice in the West Coast of Africa

10 was the title of a paper communicated by F. Fielding Gould (W. Africa)

Dr. Ould objects that such Koch's statements about quinine the Europeans on the West Coast entertain many of them a dread of ~~[illegible]~~ the drug. Quinine acts by staying the development of the malarial amoebula; it may act by binding the oxygen to the haemoglobin more closely & thus depriving the parasite of the oxygen necessary for its growth. Quinine can be given as a preventive. It can only deal with the parasite when it exists in certain stages in the blood. It cannot prevent the ~~the~~ entrance into the blood of the parasite into the blood. He quotes a statement of Bignami's in which blood rich in parasites but inoculated with quinine were incapable of reproducing malaria when injected into a healthy person. Of the methods of administration that by the mouth is perhaps preferable until gastric catarrh is present when it may be given by the rectum or hypodermically.

The prophylactic use of Quinine is in many instances harmful, by upsetting digestion; & it is persons who suffer from some catarrh or hypersemia of the liver who are wont to be most severely attacked by malaria; in them the pernicious forms of malaria, the bilious remittent & hæmoglobinuria are apt to develope.

Vide b*

Discussion on the therapeutics relating to Quinine.

L.D. Patrick Manson C.M.G., F.R.S. The reputed prophylactic action of Quinine is but a phase of its therapeutic action; it is the application of the drug to the human organism against the human body, that counteracts the action of Quinine. Just as some varieties of the parasite are highly amenable to the drug & quickly therapeutically sterilized, its prophylactic power will be greater against such. D. Manson

recommend that future experiments in prophylaxis be made with the aid of the micro. as to our reference to the quartan type of malarial parasite it is used against.

2. Lt Col. Nurse in I.M.S. states that he has invariably given Quinine both as a prophylactic and a therapeutic agent for ten years & the results have nearly always been satisfactory. Lt Col. Nurse described the only case in which he had seen Quinine cause haemoglobinuria, on that of a German Missionary, who every time he took Quinine declared that haemoglobinuria supervened & when Quinine was administered by Lt Col. Nurse the urinary trouble developed.

3. Mr. D. C. Rees (Lond: Sch: of Trop: Med:) gave his experiences of Quinine as a prophylactic in Nigeria. Mr. Rees came to the conclusion that 5 grains administ.

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tered daily although it does not reduce markedly the number of attacks of fever tends to lessen the severity & also the case mortality. He advocated introducing the needle of the hypodermic syringe into the muscle, when administering Quinine ~~by this~~ by this method; when introduced beneath the skin only - Suppuration was apt to follow.

4 D.C.J. Harford-Battersby (London) believes strongly in the prophylactic value of Quinine. Although Quinine might cause haemoglobinuria he did not believe it could cause haemoglobinuric fever. Dr. Battersby holds that there are many minor ailments attributable to malaria such as rheumatic pains, neuralgia &c. which Quinine would relieve.

5 Major Wilson R.A.M.S. did not find in the Ashanti Expedition of 1895-6 nor on the Sierra Leone coast that Quinine had much prophylactic

value. He has used the hypodermic injection of Quinine in many instances with causing local inflammation.

6. D. B.S. Ruger (Center, Clinic) described a case of Quinine ~~Poisoning~~ (in malarial blindness which however disappeared by treatment with X grains doses of Potassium Iodide.

7. Lt. Colonel B.C. Maitland I.M.S. asked for information concerning the use of methylene blue in malarial fever. During an outbreak of malaria he gave it in alternate cases with Quinine & found methylene blue gave better results. Lt. Col. Maitland found little danger in giving Quinine in pregnancy, & he has administered it without inducing abortion at any & every stage of pregnancy.

8. Mr. James Cantlie F.R.C.S. (London) related a case of fever in a child of 4 months of age. The child was born in England, ~~and~~ whilst the parents

were at home on a holiday from clinic. Nefeven continued for 6 weeks & it was only when the mother, who was nursing the child, & the child took quinine that the fever disappeared.

Ellis

9. Dr. Henderson (Shanghai) stated that the benign tertian ~~[illegible]~~ was the usual malarial parasite met with in Shanghai practice & that it readily yield to quinine. He believes quinine to be a valuable drug in pregnancy & has seen ~~[illegible]~~ miscarriages traceable to its administration. With Dr. Winn a better trial with chlorodyne some of the dangers of quinine to pregnant women ~~[illegible]~~ is possibly minimised.

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10. Major Ronald Ross (Ret I.M.S.) Liverpool drew attention to the circumstance that in old cases of malaria there may be a secondary form of fever, due to enlargement of the liver & spleen, not directly due to the presence of parasites & not amenable to quinine

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Major Ross advocates the exhibition of quinine for 3 months after infection & believes the best form of administration is in solution by mouth.

11. Dr. Gustave Rendu. (London) describes a case of haemoglobinuric fever developing in about 14 months after settlement in Central Africa. He returned to England, had a mild attack of haemoglobinuria, & after 4 months went back to Africa. During his second spell of residence there extending over 2½ years he took quinine daily in teaspoonful doses & never had a return of malaria fever.

12. Lt. Col: Oswald Baker (Ret I.M.S.) London believes the reason of quinine failing as a prophylactic is that it is not given in sufficient dose. He is of opinion that the prophylactic dose should be the same as the curative dose.

13. Colonel K. Macleod (Ret I.M.S.) Netley.

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pointed out the importance of using the microscope during the administration of Quinine as a quick & check. Both points out that malarial parasites may exist in the blood without causing pyrexia & it is necessary to ascertain the infection of the community before coming to a conclusion as to the curability of Malaria. Col. Macleod referred to the distinction to be drawn between haemoglobinuria & haemoglobinuric fever. The former was caused by many drugs but the latter seemed to be a ~~Blood~~ Specific disease.

(4) E "Notes on Filariasis

A. "the Etiology of Filariasis" by Lt. Col. J. Maitland, Professor of Surgery, Madras. Lt. Col. Maitland ~~discussed~~ referred to the observations made by Dr. G. C. Low concerning the presence of the filarial parasite in the proboscis of the mosquito, & the probability of

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the injection of the human being by the bite of the ~~insect~~ mosquito. He regards the evidence in favour of this theory as presumptive only & opposed to well attested evidence. He drew attention to the extraordinary immunity of Europeans to filariasis in districts where the natives were extensively injected, & regarded the fact, that Europeans boiled & filtered their drinking water, as an argument in favour of water being the medium of injection in filariasis. Lt.Col. Manson considers it quite possible that the young filaria may have pass the mosquito's proboscis into water instead of directly into the blood.

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Mr Thorne

B. On the metamorphosis of the Filaria Sanguinis Hominis in mosquitoes, especially with reference with metamorphosis in the Anopheles Rossii & other mosquitoes of the Anopheles Genus. by Captain J. P. James I. M.S.

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Attention was drawn in this respect
to the difference in time required
for the metamorphosis of the filaria in
mosquitoes observed by Bancroft &
Manson, & it would appear that
the period of such metamorphosis is not
yet determined definitely. Dr Bancroft,
experiments and in those ~~experiments~~ undertaken
~~in the series of~~
by Capt. James, the female culex was
the insect employed. They were bred
from larvae placed in the mosquito
containing filariated mammalia
when caught & transferred to bottles
in which the larvae were hung.
Against the water-borne theory of
injection Capt James advances the
argument that the ~~worm~~ filaria
die in 2½ hours in pure water; therefore
too short a time of existence is allowed
to ~~assume~~ the continuance of the ~~life~~
species; Capt James favours the idea
that the filaria is carried to the human
being by ~~the~~ the bites either the
anopheles or culex

Discussion.

1. D. Manson wished to make it known that the discoveries of Dr. Low & Capt James were made independently of each other, & that both observers are entitled to have their names associated with the ~~discovery~~ establishment of the fact that the filarial worm can find exit by way of the proboscis of the mosquito. As regards the relative immunity of Europeans to filarial infection as due to the use of mosquito nets & their better sanitary surroundings compared with poor natives. The process of rendering a human being richly infected by filaria probably involved a considerable time; the individual required possibly to be bitten many scores of times by filarial infected mosquitoes before the embryos appeared in sufficient numbers to cause pathological lesions of any clinical magnitude.

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the prophylactic action of quinine is due as
[illegible] of its therapeutic action — that is
the application of the drug to the parasite and
not an interference of the body against the
entrance of the parasite. Therefore we may
confidently expect that if it will cure a
malarial infection it will prevent its de-
velopment. Though not the introduction of
the parasite. Further that as some types
of the parasite are highly amenable to
the drug given therapeutically, so similarly
its prophylactic power will be greater

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Discussion on Dr.....'s Paper or Discussion.

Date.....

Section of.....

Mr. or Dr.....*No.*

"A Nervous Case" Blackwater

Exam, with Specimens

by Dr Finn

Discussion taken part in by

Dr Manson

"

"Diseases of Goorkhas"

by Dr Andrew Duncan

☞ Please write on *one side* of the paper only.

The Office of the Editor of the "British Medi

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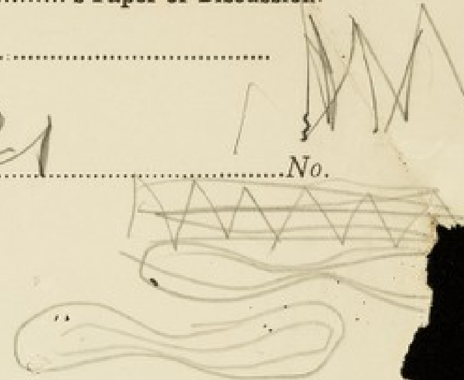
Discussion on Dr....**'s Paper or Discussion.**

Filariasis

Date..

Section of...

Mr. or Dr................................... 21 ....*No.*



Capt. James

Bancroft fed mosquitos in

1770

Lt. Col. Maitland Professor of

Madras.

Inoculation of European

Manson spoke

21 days.

Entered in proboscis in spite of

been fed in humans

filaria everywhere in mosq

body but in water mosquito

lived 3-4 hours. starved ...

direct infection nec

mosquito bite not suffi

filariae may be

Please write on *one side* of th

f the "British Medical Journal"

Ross

said a man resident of
on W. Coast all who had had
filaria from mosquito bite.

Buchanan

Hot weather Diarrhoea
of India

Thermic diarrhoea
choleraic d.
= C. infantum

sudden - early hours of ~~[illegible]~~ morning
attacked vomiting & copious
diarrhoea & cholera symptoms

Col Macleod

British
[illegible] Africa by Thin

Ophthalmic [illegible]

[illegible]ke

[illegible]ieces of food

Discussion on "Ankylostomiasis"

Opened by Major G. M. Giles I.M.S.

Taken part in by Captain Fawside. I.M.S.
Professor Leonard Rogers.
Colonel Oswald Baker.
Major Ronald Ross.
Dr. Manson.
Dr. James Cantlie.

"Abscess of the Liver."

Papers by Colonel Kenneth McLeod.
Dr. James Cantlie.
Dr. Johnston Smith.
Dr. Bassett-Smith.

The discussion on this subject was adjourned till tomorrow.

"The Leptoms Sphalangi"

Paper by Dr. George A. Williamson.

It is probable that some species of Culex are more
suitable to the development of Filaria than others.
I have recently infected some Culex taeniatus [illegible]
although they all died by the 12th day — there were
on that day when still in the thoracic muscles [illegible]
[illegible]

remarked regarding the life history of [illegible]

he had carefully studied major [illegible]

a rhabditiform stage, had partly followed them

considered that they are wrong. He thought that [illegible]

criticism of these experiments is unsound. Swiss and

Giles had mistaken angiostoma for ankylostoma embryo

Rhabdonema for ankylostoma; the speaker supported Giles

in stating that the former are common in Assam —

least in Darrang; he thought that such a mistake is

forbids a one to make be easily made by a competent

He held that the well-known fact of the disease be

so common an earth-workers' disease supported Giles's

discovery. He had long maintained the opinion regarding the

mode of infection just given by Colonel Baker, & thought that

there no little to be said in favour of infection by the mouth

of drinking water. Regarding the clinical effects of the p

he scouted the idea that it is ever always harm

is impossible to fix the exact number of parasites requ

produce pathological reaction. Rogers estimate of five

is probably much above the mark in many cases. A

number required to produce reaction must

the strength of the host. Fifty ankylostom

already debilitated by the disease or

considered that in addition the parasite

effect, and referred to Daniels discovery

cases of cases of ankylostomiasis — exam

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Continued.

He concurred with other observers in thinking that
worms may leave the patient in the last stages of
disease. He entered a plea for the much more genera
use of microscopes for the detection of the ova in localit
where the worms are prevalent, and cited
the instance of a hospital assistant, in charge of a dispensa
full of cases of ankylostomiasis, who had not even hea
the disease & who was treating the cases for
malarial cachexia.

R. Ross

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I did not think Quinine had much prophy[lactic]
effect. In the Ashanti Expedition of 1895-6 it
was tried & discarded. In S. Leone also it did not
seem to have much effect - case illustrating this
in a White N.C. Com.d Officer when Quinine was
administered by mistake by an orderly for 14 days
& afterwards the man had fever
- I do not think the subcutaneous injection causes
inflammation after using it in many cases
No doubt Burroughs & Wellcome tablets are
sometimes passed unaltered - Have se[en]
No heroic doses. 10 grains at a t[ime]
enough - Have never seen
in the urine - Gordon

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I have invariably given Quinine [illegible] as a prophy[illegible]
& as a therapeutic agent for the last 20 years & the results have ne[ver]
always been satisfactory. But with reference to
Haemoglobinuria, one case I had under my care some
ago made an impression on my mind. It was a privat[e case]
of which I have unfortunately lost the notes, & I spe[ak]
from memory. The case was treated at Rajahmund[ry]
the Hd. Qrs. of a very malarious district & [illegible]
was a German Missionary, who had been brought
down from the Rumpa Hills. It was a case of malari[al]
fever of the Remittent type, with the usual symptoms & he was put o[n]
Quinine as a matter of course, though much agai[nst]
his own wish, as he informed me the drug had on a[n]
occasion produced "bloody urine". I [illegible]
the idea, but the urine shown to [illegible]
visit was undoubtedly Haemoglob[inuric] [illegible]
by the usual chemical tests [illegible] a[nd]
under the microscope. [illegible]
was repeated [illegible] the symptoms [were] observed [illegible]
the drug was omitted, the urine was non-haemog[lobinuric]
PT

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The case did not improve in spite of treatment
— Cold packing, ice &c — & the pat. died from
hyperpyrexia, with a temp. of 109° before
death.
I may observe that this is the only case
in all my service where I have ever observed
such an effect produced by quinine &
I should like to have the opinion of others
present on the subject —
Myself I still consider quinine our sheet
anchor in malaria in all its
manifestations —

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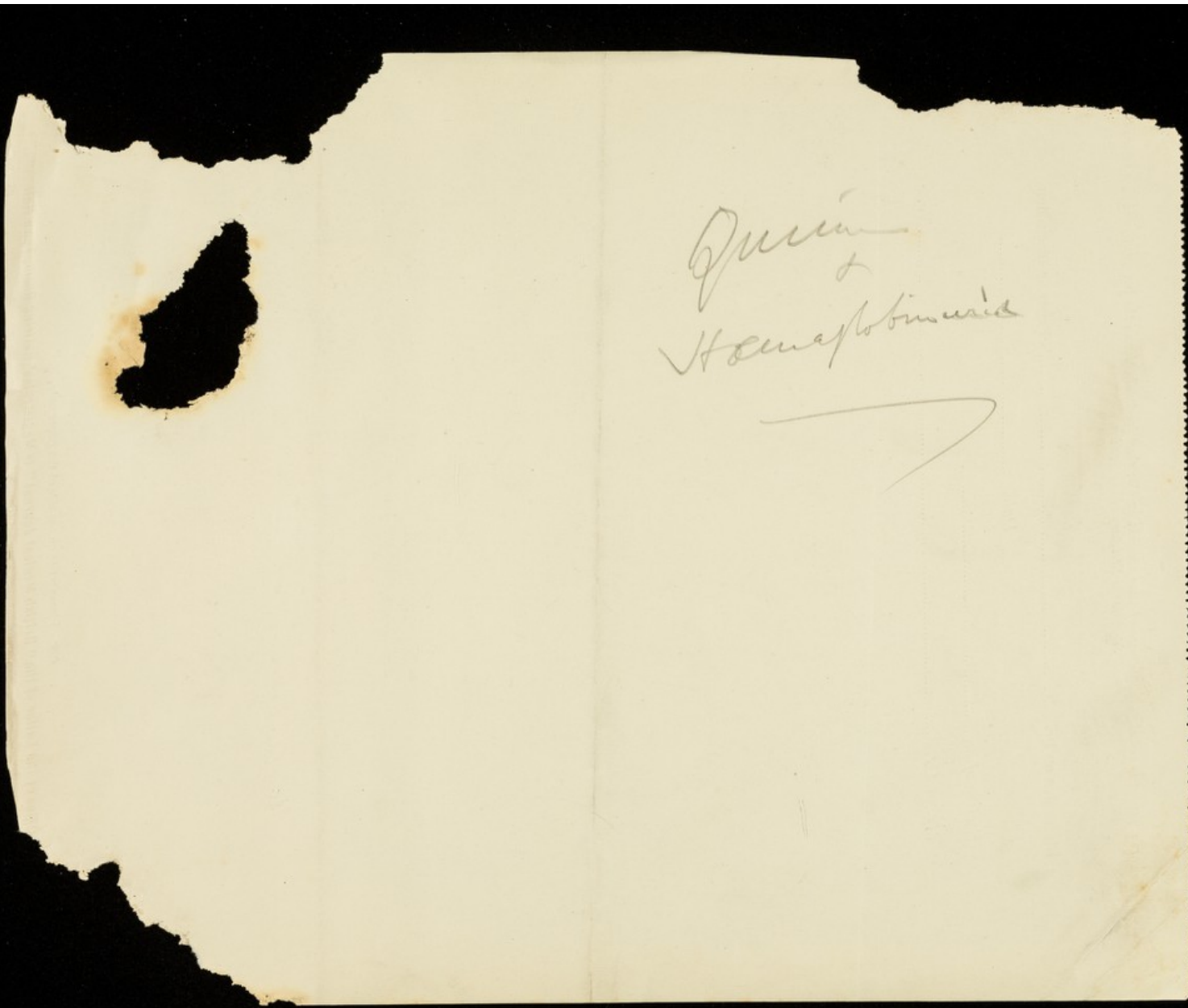

The prophylactic use of quinine was used on a large scale in Nigeria by the West African Frontier Force in 1898 unfortunately I have not the figures at hand but as they the quinine was ~~given~~ not given under supervision on account of the force being divided into small detachments. The figures would not be very valuable. I however arrived at the following conclusion, namely that five grains of quinine administered daily lessen markedly the severity of the attack but it does not reduce markedly the number of attacks of fever, ~~but~~ it lessens their severity, also the case mortality. I do not agree with Dr Fielding's experience with regard to the sloughing caused by hypodermic injection

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personally I have never produced sloughing by these injections but the injection should be administered into muscle only and hypodermically and with careful antiseptic precautions.

With regard
when I proceed to a malarious country again I shall take 2 grains of quinine 3 times a day as I believe it would be better a small quantity of drug circulating in the blood is more likely to act beneficially than one large single dose

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Gradually returned & was eventually ~~the~~ ~~eyesight was~~ quite restored.

[illegible]

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a case of
Quinine [illegible]
by Dr. B. S. Ringer

a secondary from due probably to enlargement of the liver
plexus — a form of a continued type, not directly due to the
virus most amenable to quinine. This from has been noticed
by Vandyke Carter, Kelsch & Kiener, Rothus & was observed
at Sierra Leone while studying kala-azar. He stated that Forte
was the first to point out that quinine should be given
for the cases, & cited an example in favour of this view
which which he agreed. He considered that the drug should
be continued for three months after infection & that it was
best given in solution.

R. Ross.

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of quinine. Dr G Rankin wished to enquire whether in the experience of those who had largely used quinine in the tropics. the widely expressed experience of the absence of Cinchonism could be accounted for by the ~~existence~~ fact of its administration to patients suffering from ~~of~~ malaria. Unusual in the practice of many physicians at home Cinchonism even after comparatively small doses of the drug. ~~[illegible]~~ was not uncommon.

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This important paper by Major James coming on the top of a recent paper in the Journal by Dr. George Low, of the London School of Tropical Medicine, may give rise to questions as regards priority of discovery. I am in a position to state that both observers were working ~~[illegible]~~ independently ~~of each other~~, that their observations were made practically simultaneously without reference to the other, and that therefore both share the merit of making an important contribution to tropical medicine. The observations I made on the life history of the filaria were made 20 years ago, and before the duration of the life of the mosquito had been a[...] ~~to be~~ stated, the description current in books of natural history of that time ~~as being correct in describing~~ assigning a limit of about one week to the[...]

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the mosquito as correct. I would know that to be wrong. ~~and that~~ My feeling is that Bancroft is approximately correct when he states that ~~adopts~~ a period of about 3 weeks is necessary to the completion of the metamorphosis of the filaria in the mosquito. Still it is quite possible that in particular species of mosquito and in the presence of high atmospheric temperature the process, as Dr Sambon suggests, may be ~~hurried~~ completed in the time originally adopted. I do not think so, but it is possible.
to it. We know that temperature has an important influence on the development of the malaria parasite in the human

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of insects. The part of the presence of the filaria in the proboscis of the mosquito empties, with, not actually proving, that the parasite is directly inoculated into man by mosquito bites. At the same time we must remember that the fully metamorphosed filaria is sometimes found around the stomach, about the viscera and elsewhere than in the head of the mosquito. It is quite possible therefore that it may become the insect by some other channel than by the proboscis and that it may be passed into water with the faeces. The eggs, or even the proboscis ~~when the may~~. We found the

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young
filaria can live for several hours in water.
It dies then after a time, possibly from
want of food. It may be that, as with
the embryos of dracunculus, it would live
longer in dirty water. Experiments to test
this should be made. If any one is foolhardy
enough to submit to be bitten by filariated
mosquitoes, and if subsequently ~~it be found~~
no young filariæ be found in the blood
it must not be concluded from this that
the mosquito bite is not the medium of
infection. My belief is that before embryos

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can be found in the blood by ordinary microscopic examination large numbers of parent filaria must be present in the ~~blood~~ system. In many cases We know that ~~these must be~~ are ~~must be~~ present hundreds of parent filaria. Thus in one case only ½ or ⅓ embryo filaria are found in each drop of blood, while other individuals as many as 600 or more are found in a drop - that is 300 times as many; implying the presence of 300 times as many parental worms - Assuming that a male & female produce on injection of 2 ~~fetus~~ embryos in the drop, there must be 600 parents to produce

600 embryos to the drop. It is by no means certain that 7 embryos per drop is the minimum infection; if the minimum infection is less than this, we may infer that to produce a recognisable infection by mosquito bites it may require dozens of inoculations on the assumption that the filaria is conveyed by mosquito bite. One can easily understand how it is that high degrees of filarial infection occur in nature, and how rarely filarial infection is detectable in Europeans – The native sleeping constantly in the same house without a mosquito net is month after month and year after year infected by his own filaria

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charged mosquitoes; whereas the European, though he may be bitten by filariated mosquitoes once or twice, is less likely in consequence of his superior hygienic surroundings & his use of the mosquito net to be repeatedly and richly infected. It is much the same in this respect with the filaria as with the malaria parasite.

The subject of filariasis is by no means worn out. It is of great importance on its own accou[nt] but even more ~~in consequence~~ on account of the remarkab[le] analogy that obtains between it and malaria

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The ~~parallel~~ analogy runs through the entire life-history of both parasites from ~~generation~~ segmenting to their pathological effects - both ~~have~~, the human blood by the mosquito, both develope in the mosquito tissues, both probably quit the mosquito via the proboscis, both are inoculated by mosquito bites, both exhibit a remarkable periodicity in the human blood, and both give rise to recurring fevers. The ~~that~~ further study of the filaria is therefore highly desirable as ~~it~~ calculated to throw ~~light~~ yet additional light on the more important Malaria parasite.

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referred to the case of an Irish Gentleman living in the West Indies, a patient of his, who suffers from elephantiasis of the right leg, & who has long ascribed the disease to the bite of a mosquito on the right ankle

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It may be quite true that hæmoglobinuric fever is
an expression of malarial infection (indeed my own
opinion, based however on considerations of probability
rather than on demonstrated fact, is that it is) still I
would protest against jumping at the conclusion that
hæmoglobinuric fever is a form of malaria merely
on the strength of
~~the~~ the discovery of the malarial parasite in
the patient's blood, or of melanin in his urine.
hæmoglobinuria
Concurrence of two facts by no means implies
cause and effect relationship of the two
Indeed it would be strange if we did
find positive evidences of recent
a long preparation of
tion in all cadavers of Europeans
such highly malarial countries

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Central Africa or West Africa. It would not be justifiable to conclude ~~that the~~ because we ~~presence of~~ found melanin in the liver or spleen in a case of cut throat in British Central Africa that the suicide was caused by malaria; neither is it justifiable to interpret ~~the case~~ its presence in haemoglobinuric fever in a similar se[...] Such ~~views~~ rashness in accepting the concurrence ~~of~~ of certain facts as being con[...] evidence is not likely to lead to, I might say is likely to retard, the unravelling of [...] mystery of black water fever.

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against such; thus we may confidently expect it to be actively prophylactic as against the benign tertian, less active against the malignant-tertian. The value of the drug is apt to be underrated in consequence of its being given, under conditions in which it cannot be absorbed - as in slaters & sufferers ~~from~~ gastro-intestinal catarrh. Such failures should be eliminated in assessing its prophylactic value.

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I would recommend that future
experiments in prophylaxis ~~should~~
be made with the aid of the
microscope and in reference to the
particular type of malarial parasite it is
used against; and, also, that the
gastro-intestinal condition of the
individual experimented on be
investigated and recorded.

we received the Nurse tissue at the London School of Tropical Medicine from another source. I came to the conclusion that death was not due to an ordinary malarial infection. The amount of Haemoglobin in the kidneys & skin again was in such amount that if the case had been one of malaria - pigment would have been in much larger amount. I came to the conclusion that the melanin that was present was due to previous malarial infections. Other cases that sets of tissues which we have examined

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Discussion on Dr. Ross **'s Paper or Discussion.**

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Section of Medicine

Mr. or Dr. Dutton *No.*

(6)

Lately tried to show that Rhodesian fever is not of primary malarial origin

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It is somewhat singular that Rhabdonema intestinale
does so seldom found by Giles in Assam, considering that
it is so frequently associated elsewhere with the ankylostomum and that
the climate and other physical conditions closely
resemble those of Cochin China where the parasite is extremely
common to him, indeed, it was first discovered by Normand.
I have frequently met with it in the stools of Indians.
I have twice encountered the ankylostomum in dangerous
progress in Englishmen from abroad. One case came
from the West Indies & had been in hospital
here for many months and was ultimately discharged
as hopelessly ill with pernicious anaemia. Fortunately after his discharge as an incurable
I consulted a practitioner in the country
who found ova recognised to be those of the
ankylostomum. Under treatment with thymol
the patient got quite well. A second case
came from Singapore. Ankylostomiasis had been

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Discussion on Dr....**'s Paper or Discussion.**

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Mr. or Dr. cases from W. Indies & [illegible] *No.* ap-

diagnosed but specific treatment was postponed un-
it could be undertaken under more favourable clima-
conditions. When I saw the patient he was profoundly
anaemic – as in advanced Bright's disease, with
vertigo, tinnitus, palpitations, breathlessness and all
the symptoms of advanced anaemia. Every slide of
his faeces showed numerous ankylostoma ova.
Under thymol he rapidly recovered and left for
the East again quite well. I am astonished
at Dr. Francis's ~~verdict as~~ statements as to the therapeutic
importance of thymol. In my experience it rarely
fails provided it be given in adequate and rapidly
repeated doses – say 30 grains every hour for 4
times. The diagnosis of malaria from

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on Hydrobromidis by hæmocytometric methods. Though interesting & valuable from a pathological point of view is impracticable under ordinary circumstances. Dr Rogers statements as to the presence of a leucocytosis during the acute stage of malarial infection are not in accordance with recent observation & perhaps I misunderstood his meaning that the presence of a leucocytosis is generally held nowadays to exclude the diagnosis of malaria. I am disappointed that none of the papers have alluded to Pavalli's interesting observation that total nut chewing is possibly a ~~protective~~ protective habit in the natives of Assam, Burma & the Eastern Peninsula, acquired instinctively in consequence of its prophylactic virtues against the ague to which they are subject. I agree with Colonel Bradley

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remark that the parasite is generally acquired in food and drink rather than in water, and that improved methods might call condemnation are much to be desired on this account in the East. I believe the Chinese method of drying milk might call to be a good one on sanitary grounds. The soil is stored in cemented tanks where it rests and ferments for months before it is used as a fertiliser. During this period of storage it is probable that the ova & embryos of the intestinal entozoa it may contain are killed.

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