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MADRAS RECORD OFFICE.

Government of Madras.

Public DEPARTMENT

G.O. No.	29	Press Mls
Dated	11-11-37	19-11-37

Not to be folded or roughly handled

No. 18. Read the following letter from W. MACKENZIE, Esq., M.D., C.S.I., Inspector-General, Indian Medical Department, to the Chief Secretary to Government, Fort Saint George, dated Fort Saint George, 21st December 1870, No. 319:—

I have the honour to report, for the information of Government, that upwards of a year ago Mr. Broughton, the Government Quinologist, forwarded to me, for trial in the hospitals of this Presidency, a preparation of the Neilgherry Plantation Cinchonas, which, as it contains the several alkaloids in the exact proportions in which they occur naturally in the bark and is easily prepared, he suggested might be found a cheap and efficient substitute for English quinine.

2. With the view of subjecting its febrifuge power to the severest test, I selected, at the outset, for experimental trial, the notoriously feverish stations of Goodaloor and Luckady, in Wynaad; Russelcondah, in the Northern Circars; and Doomagoodium, in the Upper Godavery; and the results have been so favourable that I consider I may now bring the preparation to the notice of Government, with full confidence in its efficacy as a remedy in malarious fever, scarcely, if at all, inferior to quinine.

3. Five hundred and thirteen cases, some of which were of a severe remittent form, have been treated with this remedy with a success such as might have been expected from ordinary quinine. The average time each patient was under treatment was only 4·8 days, and the average total quantity of the drug used in each case amounted to but forty-three grains.

4. Mr. Wade, an intelligent and careful observer, who had previously conducted similar experiments with the salts of cinchonine, cinchonidine, and quinidine, was entrusted with the duty of testing the new remedy at Goodaloor, and he sums up his experience of it by stating that, although he does not consider it fully equal in strength to quinine, and rather more apt in large doses to cause vomiting or looseness of the bowels, still he entertains a high opinion of its antiperiodic power. He reports that, amongst the eighty cases treated by him, there were "many old patients who had previously suffered from fever, with usually a small atonic pulse, weak habit of body, flabby tongue, torpid liver, and enlarged spleen. These were generally emaciated, and with a tendency to anasarcaous effusion." Taking these complications into account, the results at Goodaloor appear to me to be very satisfactory.

5. Assistant Surgeon Hazlett, who conducted the trials at Doomagoodium, makes the following remarks regarding his experience of the value of the drug:—
"In comparing the efficacy of the amorphous alkaloid with quinine, from fifteen to twenty grains of the latter have usually been found sufficient here to prevent a return of the paroxysm in uncomplicated cases of intermittent fever; but in the sixty-six cases of quotidian, which were treated with the alkaloid, there are only sixteen in which twenty grains and less were sufficient for the same purpose, and, in the remainder of the cases, the amount given in each ranged from twenty to seventy-two grains; but amongst these were several severe cases which would probably have required considerably more than twenty grains of quinine.

"Taking everything into consideration, I consider the amorphous alkaloid as very little inferior in antiperiodic qualities to quinine, and it possesses the

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11th January 1871.

"advantage of much less frequently or violently causing headache or giddiness, although it has a tendency to cause nausea, and, in occasional cases, it acts as a purgative."

6. Assistant Apothecary Kemp reports as follows from Russelcondah:—"The general results relative to the amorphous precipitated alkaloid are in its favour, as a serviceable and good antiperiodic, equal to quinine, without the attending inconveniences which accompany the administration of the sulphate" (of quinine).

7. Subsequently, I requested Dr. Scudder, at Arcot, to be good enough to give the remedy a fair trial in his dispensary practice, and he has reported as follows regarding the results—

i. "In all cases in which I have used it, I have found it a specific for the different forms of malarious fevers, quite as much so as the quinae sulphas.

ii. "The quantity of the amorphous quinine requires to be somewhat larger than that of the sulphate, in order to produce the same result.

iii. "It requires about the same amount of acid to dissolve it, but does not dissolve as speedily as the sulphate.

iv. "In chronic cases of fever I prefer small doses frequently repeated, in combination with dilute sulphuric acid and infusion of chiretta, to large doses.

v. "In acute cases and recent, I prefer large doses without acid.

iv. "In my hands so far the amorphous quinine has been successful. Every case has yielded to which I was able to pay proper attention, that is, every case in which the patient has strictly followed instructions, and every case that has occurred in hospital. I am, therefore, strongly in favour of using it in the place of the sulphate, as far as possible."

8. The preparation may be most conveniently administered in the same dose and in precisely the same manner as the sulphate of quinine, viz., by dissolving it in water with the aid of a little dilute sulphuric acid. It may also be given in the form of powder alone, or mixed with any convenient vehicle, or diffused through water.

9. In a previous communication to Government, marginally noted, I have stated that Mr. Broughton estimated that, when the Neilgherry Cinchona plantations were in full bearing, they would be capable of yielding about 1300 lbs. annually of this preparation, and that the cost of it, if the manufacture were conducted on a large scale and on the plantations themselves, would eventually be reduced to a minimum of from 8 to 11 Annas per ounce.

10. During the last five years, the annual average consumption of English-made quinine and other cinchona alkaloids in this Presidency has been nearly 400 lbs., and past experience leads me to anticipate a gradual yearly increase in future. The cost of 400 lbs., at the medium price of Rupees 2-0-9 per ounce, has been Rupees 16,400, whereas the cost of the same quantity of Mr. Broughton's preparation, even at the higher figure of 11 Annas per ounce, would only be Rupees 4,400, making a difference of Rupees 12,000. Presuming, then, that but 200 lbs. of the annual expenditure would consist of the amorphous alkaloid, there would still be a saving to Government to the extent of Rupees 6,000.

Letter, No. 319, of 20th August 1869.
Proceedings of Government, No. 1415,
of 13th October 1869.

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11th January 1871.

11. The therapeutic value of the remedy has been brought to the notice of the medical profession through the medium of the *Madras Medical Journal*, and I am of opinion that it might now be very advantageously introduced, as a regular supply, into dispensary practice, and thereby considerably diminish the cost to Government of the more expensive quinine.

12. I would, also, respectfully recommend that an attempt may be made to acquaint the natives of the country with its efficacy, in fever, so that they may be induced to provide themselves with an indigenous febrifuge, so cheap as to be within the reach of the poorest classes. With the view of effecting so desirable a result, I would suggest that supplies of the preparation be issued from the Medical Stores to Collectors in the more feverish districts of the Presidency, partly for gratuitous distribution, and partly for experimental sale.

13. Further trials of the remedy are still in progress in different parts of the Presidency, and the results will, in due course, be communicated for the information of Government.

No. 19. ORDER THEREON, 11th January 1871, No. 29.

The Government have received, with much satisfaction, the report submitted by the Inspector-General, Indian Medical Department, on the successful results obtained in the experiments made for testing the therapeutic value of amorphous quinine. They concur with Dr. Mackenzie in the opinion that the amorphous quinine may, with advantage, be introduced as a regular supply to dispensaries.

2. Dr. Mackenzie's suggestion that supplies of this preparation be issued to Collectors in the more feverish districts of the Presidency, partly for gratuitous distribution, and partly for experimental sale, is approved.

(True Extract.)

Chief Secretary.

To the Inspector-General, Indian Medical Department.

„ Revenue Department.

To all Collectors.

To the Examiner, Medical Accounts.

Exd. J. Wright.

Public Department

PROCEEDINGS of the MADRAS GOVERNMENT.

Read the following letter

from the
Inspector General, Indian
Medical Dept., dated 21st Dec
1899, No 819.

Order thereon No. 104 of 29th Dec.

The Govt. have re-
ceived with much satis-
faction the report sub-
mitted by the Inspector
General, Indian Medical
Department, on the success-
ful results obtained in the
experiments made for testing
the therapeutic value of
Amorphous Quinine. They

concur with Dr. Mackenzie
in the opinion that the
Amorphous Quinine may
with

I. D. S.
This should be
comm. to Med Dept

5064 of 1871 2300115

PUBLIC.

To

THE INSPECTOR-GENERAL,
INDIAN MEDICAL DEPARTMENT,
Secy. to Govt.

Dated January, 1900.

Recd.

Ans.

G. O. 110 January 1891, No. 29.

JANUARY,
1900. 18-13.

Approval of the execution of the Inspector-
General, Indian Medical Department, is given to
the above proposed subject of the Presidency
Amorphous Quinine for Quinine distribution
entirely.

with advantage, be intro-
duced as a regular supply
to Dispensaries. 2. I?

MacKenzie's suggestion
that supplies of this pre-
paration be issued to Col-
lectors in the more fever-
ish districts of the Pre-
sidency, partly for gratu-
itous distribution, and
partly for experimental
sale, is approved.

W. H. A.

18
Superintend. of Med. Depart.
Revenue Department. }
All Collectors }
Examine Medical Accounts }

Count. of 1877 } **Madras.**

To Public

The Hon^{ble} Secy. to Govt. of Madras.
Secy.

Dated *Jan. 11.* }
Recd. *1877*, No. *29.*

Nos. 10. 19.

Approving of the suggestion of
the Secy to Govt. of Madras, 1877,
to issue to the under printed
District of the Presidency of
Madras and District, for
provisional distribution &
sale.

Secy.