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GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

8th October 1880, No. 1492.

Cinchona Febrifuge.

Read the following paper:—

No. 28. *From Surgeon-Major W. R. CORNISH, F.R.C.S., C.I.E., Surgeon-General with the Government of Madras, to the Chief Secretary to Government, dated Fort St. George, 27th September* 1880, *No.* 409.

With reference to Order of Government, No. 1347, of the 6th September 1880, I have the honor to report that the cinchona febrifuge of Bengal has, I consider, passed beyond the stage of trial, and that it may, without further question of its merits, be regarded as a preparation suitable for general use in the hospitals and dispensaries of the country.

2. As Government are aware, I have already given effect to this conclusion by limiting the use of sulphate of quinine in civil hospitals and institutions under my control to one-fourth of the total quantity of cinchona alkaloids issued, leaving the remaining three-fourths to be made up by the cheaper salts of cinchonine or cinchonidine as manufactured in Europe or by the Bengal febrifuge made in Darjeeling. This measure, when it is brought into full working, will save the Madras Government some thousands of pounds a year without any sacrifice of efficiency.

3. In regard to trials of the amorphous alkaloids prepared at Darjeeling, it will scarcely be out of place to note that, as long ago as January 1870, I contributed a paper to the *Madras Journal of Medical Sciences* "on the therapeutical value of amorphous quinine and other alkaloids obtained from cinchona barks grown in India, and that in this paper I recorded the results of 268 cases of malarious fever treated by a similar preparation prepared by Mr. Broughton, the Government Quinologist. However the mode of preparing the alkaloids might have differed, Mr. Broughton's product and Mr. Wood's were essentially the same. The conclusions then arrived at have not been upset by any subsequent experience. These were briefly that (1) in large doses the amorphous alkaloids sometimes caused nausea or purging, but that in ordinary five-grain or smaller doses the preparation caused no unpleasant symptoms and was effectual in curing fevers. I may quote here the following extracts from my paper:—

"(2.) From what has already been determined by the several Cinchona Commissions in this country in regard to the anti-periodic action of the several alkaloids of cinchona bark and of the bark itself, it might have been anticipated that the precipitated alkaloids, in the exact proportion in which they naturally occur in bark, would have also shown very similar febrifuge power." "The results obtained in these experimental trials prove that this is really the case. Weight for weight it seems probable that the crystalline salts are to be preferred, but as regards all essential points there can be no question but that this cheap preparation is quite as useful as the more elegant and costly bleached crystals of disulphate of quinine." * * * "it contains in a cheap and convenient form every constituent of the cinchona bark that is of the least value in fever. Every effort should be made to demonstrate to the natives of India its value."

4. The preparations made by Mr. Broughton and by Mr. Wood at Sikkim had both this objection, that they were disagreeable to the taste and smell. As regards the Nilgiri Manufactory, Government long since closed it on account of incommensurate value of the product in regard to the market price of crude bark, but in regard to the Bengal febrifuge which has since been produced on a large scale these objections still apply, and I do not see that any great improvement has been effected in the manufacture to make the drug less nauseous. If these objections were got over, I am sure that the Medical officers and subordinates under my control would use it to a greater extent than they now do, but, so long as sulphates of cinchonine and

cinchonidine are cheap and practically about the same price as the Bengal preparation, I do not think it would be prudent to force the Bengal preparation on the officers of the department to the exclusion of the preparations made in Europe.

5. Already the Bengal febrifuge is sent out to all Civil Hospitals in a certain proportion as regards other alkaloidal preparations of cinchona, and its use is everywhere encouraged in the treatment of ordinary fevers. The extension of its use in this Presidency will be a work of time, but, if Bengal could supply a crystalline preparation, I am certain that it would soon displace to a great extent the salts of quinine, cinchonidine, and cinchonine now obtained from Europe. (Whether the drug can be prepared in this form as cheaply in India as in Europe is a point on which I have grave doubts.)

6. I append hereto an extract from a communication made by Surgeon-Major M. C. Furnell, late Physician of the General Hospital, Madras (whose experience has been considerable), in regard to his estimation of the value of the remedy. It will be seen that the drug has already had a fair trial at the General Hospital, in which institution it is largely used:—

"As regards the mixed cinchona alkaloids, there exists no doubt in my mind that in nearly all cases they are equal, and in some they are superior, to quinine. During the winter session of 1878-79 I kept charts of their effects in fever cases, and I append (Appendix C) two or three of the most remarkable; this result made a great impression on my mind, as it was entirely different from what I anticipated and contrary to the conclusion arrived at in previous experiments in this hospital both by myself and my predecessors. This can only be accounted for by presuming that the present alkaloids are more carefully prepared. If administered in the form of pill made of the powder with a little lime-juice—a very simple, but very efficacious, way of preparing the remedy—much of the sickness complained of by some patients does not arise. Still it must be owned some patients have an idiosyncratic repugnance to the medicine, and it produces in them an obstinate vomiting. Perhaps some day it will be discovered what part of the drug it is which causes the vomiting, and this will be eliminated. It must be remembered, however, there are some people who exhibit an almost equal antipathy to quinine."

7. The subject of Dr. King's 4th paragraph has already been explained in G.O., No. 1065, of 13th July 1880, which, it is understood, was communicated to the Government of India.

8. The half-yearly report on the use of these cinchona alkaloids in dispensary practice up to the 30th June embodied in my letter, No. 408, of 27th September 1880, will show that in comparison with sulphates of cinchonine and cinchonidine the Bengal febrifuge holds a good place and that further reports on its efficacy are not required.

No. 29. ORDER THEREON, 8th October 1880, No. 1492.

Dr. Cornish's interesting report will be transmitted to the Government of India in continuation of G.O., No. 1473, dated 6th October 1880, and with reference to letter in the Home, Revenue, and Agricultural Department (Medical), No. 367, dated 17th August 1880.

(True Extract.)

for Chief Secretary.

To the Surgeon-General with the Government of Madras.
" Revenue Department.
" Military Department.

Exd. J. W Fischer.

Revenue 1880 Dept
No 1415.

Govt. of {1880} Madras.

PUBLIC.

To

THE SURGEON-GENERAL WITH THE GOVERNMENT OF MADRAS,

&c., &c. &c.

Dated October, 8th.

Issued — 11

Read — 25

OCTOBER.
Nos. 23-29.

Cinchona Febrifuge.—Surgeon-General's letter reporting on the general use of the Bengal febrifuge in the hospitals and dispensaries of this Presidency, forwarded to the Government of India.

Copy forwarded to the Board of Revenue
and the Commissioner of Religious and Charitable
Endowments for information
Public Office, 23rd Oct. 1880.
Secretary to Government.