

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No.	1229	Press ~~Mis.~~
Dated	23. 5.	18 66.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Revenue Department,
23rd May 1866.*

No. 421. Read the following letter from the Officiating Principal Inspector General, Medical Department, to the Secretary to Government, Revenue Department, dated Fort Saint George, 15th May 1866, No. 173 :—

1. I have the honor to forward a report on the febrifuge properties of the leaves of Chinchona, as directed in Proceedings of Government, 12th June 1865, No. 1,283, Revenue Department.
Dated 7th May 1866.

2. Dr. Chipperfield used the remedy in twenty-six cases of fever, but it was only in cases Nos. 6, 11, 16, 24, and 26, given in the table, that it can be considered as having acted as an antiperiodic, and these were evidently very mild cases of fever. Dr. Chipperfield observes "a more extended trial of the leaves is required before any correct conclusion can be arrived at, as to their value as an antiperiodic." Instructions for a fair trial of the leaves and twigs are embodied in the letter about to be issued to the Medical Officers selected to carry out the testing of the alkaloids. I respectfully suggest that Dr. Chipperfield's report be printed and circulated to these gentlemen.

3. It is not said when the leaves were gathered, but it must have been recently. I do not consider that the dryness described by Dr. Chipperfield materially affected their medical powers, but should it be found to be the case, their use must be very limited.

Report on the febrifuge properties of the leaves of Chinchona.

1. On the 29th of November 1865 I received two wax-cloth parcels, containing, the one 8 lbs. of the leaves of Chinchona Succirubra, and the other 8 lbs. of the leaves of Chinchona Condaminea, with instructions to make trial of various preparations of these leaves in cases of fever. The leaves were not in such a fresh state as I expected to find them, but were so nearly dry as to be capable of being rubbed into a coarse powder.

2. I wrote out the following formule, and gave them to the Superintendents of the Dispensing Department, for their guidance :—

I.—Cold infusion of Chinchona leaves.

Take of leaves of Chinchona 1½ oz.

Diluted Sulphuric Acid ¼ oz.

Cold water 20 oz.

Infuse for twelve hours and strain.

II.—Acid decoction of Chinchona leaves.

Take of Chinchona leaves 1½ oz.

Diluted Sulphuric Acid ¼ oz.

Cold water 20 oz.

Boil for ten minutes and strain.

III.—Stronger decoction of Chinchona leaves.

Take of Chinchona leaves 1 oz.

Cold water 6 oz.

Boil for ten minutes and strain.

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3. There was some waste in consequence of decomposition occurring in the infusion, which was necessarily kept ready-prepared in case of its being required; but by management this waste was reduced to the lowest possible amount.

4. The appended table shews the result of the trial. Preparation No. I. was prepared entirely from the Chinchona Succirubra, and was administered in doses of 3 or 4 oz., three times daily, in cases Nos. 1 to 12 in the table.

5. Preparation No. II. was prepared partly from the Chinchona Succirubra and partly from the Chinchona Condaminea, and was administered in doses of 4 oz., thrice daily, in cases 13 to 20.

6. Preparation No. III. was prepared entirely from the Chinchona Condaminea, and was administered in doses of 6 oz., twice daily, in cases 21 to 26.

7. I observed no difference, as regards febrifuge property, in the leaves of the two species of Chinchona submitted to trial; but, although the table does not shew this, it appeared to me that preparation No. III. was the most effectual.

8. Preparations Nos. I. and II. were used as a tonic, with the best results, in doses varying from 2 to 4 oz., thrice daily, by nineteen patients, some of whom had previously suffered from fever and remained in a debilitated condition.

9. I think that cases Nos. 4, 5, 7, 13, 14, 15, 17, 21, and 23 may fairly be removed from the table, as they were cases either of simple febricula, or of such mild intermittents as might readily have been cured without resorting to any preparation of Chinchona.

10. So far as my experience enables me to judge, I am led to the conclusion that in simple cases of mild intermittents the remedy may be trusted to, but that in severe cases of malarious fever it is not one on which any great reliance can be placed, and that it is in no way comparable to the extracted alkaloid salt, Disulphate of Quinine, as a Quinine trustworthy antiperiodic.

11. I observe that in Mr. Howard's Report on the Chinchona leaves from Ootacamund, (Madras Quarterly Medical Journal, Volume VII., page 425,) it is stated that the quantity of Quinine contained in the leaves is very small, viz., 0.11 per cent. of alkaloid, soluble partly in alcohol and partly in ether, and 0.19 per cent. contaminated with an astringent extractive matter. Granting that 0.30 per cent. of this impure Quinine is obtainable from the leaves, and that all of this is taken up by the water of the infusions and decoctions I had made, one pint of preparation, Nos. I. and II., would contain not quite 2½ grains of Quinine, and each dose of 4 oz. would contain less than ½ a grain; and the dose, 6 oz., of preparation No. III., would contain about 1½ grain. But it cannot be supposed that any thing like the whole quantity of the Quinine is taken up by the water. However, as Mr. Howard points out, the Kinovic acid, which is abundant, may assist the action.

12. It appears to me that a much more extended trial of the leaves is required before any correct conclusion can be arrived at, as to their value as an antiperiodic, but that the bitter infusion acts well in giving tone in cases of atonic dyspepsia and of debility, especially after fever; and I consider that the Infusum Chinchona Foliorum would be a useful addition to our list of bitter vegetable infusions.

13. Should the Principal Inspector General be of opinion that further experiment is desirable, I shall be happy to carry out his views on being furnished with another supply of the fresh leaves.

MADRAS, (Signed) W. N. CHIPPERFIELD, Assistant Surgeon,
7th May 1866. Acting Physician, General Hospital.

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Table of Fever Cases treated by preparations of Chinchona leaves.

Number of Case.	Type of Fever.	Number of days taking the remedy.	Number of doses taken.	Number of days Fever was		Remarks.
				Present.	Absent.	
1	Tertian ...	6	18	1	5	Cured, but had taken large doses of Quinine for five days previous to commencing the remedy.
2	Remittent...	8	24	8	0	Fever uninfluenced by the remedy.
3	" ...	9	27	0	9	This was a relapse. Took Quinine for three days before commencing the remedy.
4	Quotidian ...	5	15	1	4	A mild case. Cur-d.
5	" ...	5	15	1	4	Do. do.
6	" ...	6	18	3	3	Cured.
7	" ...	2	6	0	2	Do. A mild case.
8	" ...	4	12	4	0	Remedy with effect.
9	Tertian ...	6	18	3	3	Do. cured by Quinine.
10	Quotidian ...	1	2	1	0	Remedy nauseated patient. Do.
11	" ...	6	18	2	4	Cured.
12	" ...	5	15	2	3	Quinine resorted to.
13	Febricula ...	5	15	1	4	A simple case. Cured.
14	" ...	3	9	0	3	Do. do.
15	" ...	3	9	0	3	Do. do.
16	Quotidian ...	6	18	2	4	Cured.
17	" ...	5	15	0	5	Do. A mild case.
18	" ...	5	15	5	0	No effect. An obstinate case in a Bombay Marine. Transferred to Bombay.
19	" ...	3	8	3	0	Cured by Arsenic.
20	" ...	13	33	2	11	On each day when fever occurred took grains 15 of Quinine.
21	Common Continued.	7	21	0	7	Cured.
22	Remittent...	10	20	8	2	A very obstinate case, still under treatment.
23	Febricula ...	1	2	0	1	A very mild case. Cured.
24	Quotidian ...	3	6	1	2	Do. do.
25	" ...	5	8	4	1	Quinine resorted to.
26	" ...	4	8	2	2	A mild case. Cured.

(Signed) W. N. CHIPPERFIELD, Assistant Surgeon,
Acting Physician, General Hospital.

No. 422. ORDER THEREON, 23rd May 1866, No. 1,229.
1. Mr. Shaw will apply direct to Mr. McIvor for Chinchona leaves, as required.
2. The experiment should be tried with freshly gathered as well as with dried leaves. Even if drying the leaves affects their febrifugal qualities, their use will still be general among native growers, and it is desirable that this question, viz., the effect of drying the leaves, should be tested carefully.
(True Extract.)

(Signed) J. D. SIM,
Secretary to Government.

To the Principal Inspector General, Medical Department.
,, the Superintendent Government Chinchona Plantations.
Exd. S. T. Augustin.

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direct to Mr. McLean
for Chin-chona leaves,
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J. S. S.

23rd May 1866

Received the Redwood from J. S. S. and J. S. S. 23rd May 1866

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