Syrup of Cinchonia.

Simple syrup.....	1 livre.
Sulphate of cinchonia.....	48 grains.

This syrup may be employed in the same doses, and under the same circumstances, as the syrup of quinia.

Wine of Cinchonia.

Madeira.....	1 litre.
Sulphate of cinchonia.....	24 grains.

This may also be made with vin ordinaire.

Tincture of Cinchonia.

Sulphate of cinchonia	12 grains.
Alcohol at 34°	1 once.

A wine of cinchonia may be prepared by adding two ounces of this tincture to a pint of Madeira.

OF THE EMPLOYMENT OF SULPHATE OF QUINIA IN COMBINATION WITH OTHER MEDICINES.

With Opium or Morphia.

Many celebrated physicians have recommended the combination of opium with bark in the treatment of obstinate intermittents. Störck, Hoffman, Rivière, Sydenham, and Lind, frequently employed it with success. Sarcome made use of it when irritability of the stomach occasioned the rejection of the cinchona. Although the discovery of the sulphate of quinia has

in a great measure obviated these inconveniences, there are yet circumstances in which it is useful to unite the sulphate with opium, or still preferably with morphia. Intermittents, which had resisted the sulphate of quinia alone, have been known to yield to this combination.

M. Sédillot has published two important observations selected from many others, on the conjoint use of bark and opium in obstinate intermittents;* he has also combined the quinia with opium; and has treated intermittent neuralgiæ with success on the same plan.

Mode of administration.

M. Sédillot was formerly in the habit of giving an ounce of the bark with two or three grains of opium in the course of the day; he now substitutes for the bark fifteen or twenty grains of sulphate of quinia. He administers the remedy in divided doses in the intervals of the paroxysms, and continues it for eight days after their cessation.

M. Sédillot has never known the combination of bark or sulphate of quinia with opium fail in any case of whatever duration, type, or intensity, provided it was not complicated with organic lesion.

Instead of uniting the sulphate of quinia with opium, we would propose the following combination of the sulphates of quinia and morphia.

Sulphate of quinia ..... 2 to 6 grains.
Sulphate of morphia..... ½ to 1 grain.

To be divided into two, three, or four doses.

It would be possible to combine the sulphuric acid directly with morphia and quinia, by observing the quantity of each base necessary to saturate the acid; the crystallization of these mixed sulphates would however be very difficult.

* Journ. Gén. tom. xcvii. p. 9.

Combination with an Emetic.

Other physicians have proposed to associate an emetic with the sulphate of quinia in the treatment of intermittents.

Dr. Dominique Gola* cured on this plan four cases of intermittent fever, which had resisted the sulphate alone. He used the following:

Emetic tartar.....	gr. iij.
Sulphate of quinia.	gr. x.

Mix thoroughly, and divide into six equal parts, of which one is to be taken every two hours during the intermission.

M. Gola says that the first dose produced sometimes vomiting of bitter matter, and sometimes alvine evacuations; occasionally, however, no evacuant effect was produced; but the fever did not cease the less readily.

In a few instances this combination may, no doubt, be useful, but the sulphate of quinia alone suffices in the majority of cases.

[The long experience of British practitioners of the powerful and certain effects of quinia renders altogether unnecessary any attempt to bring into a small space the results of its employment in almost every known disorder. I cannot help thinking, however, that the combinations of quinia with other remedies are not sufficiently considered in the medical practice of this country. We seldom hear of its administration in any other form than that of supersulphate in infusion of roses. Of its combination with stimulating, that is, small doses of opium in the exhaustion of typhoid fever, I can speak with certainty and with favour. Nor is it less to be relied on in the chronic bronchitic affections of middle-aged and elderly persons, more or less of decidedly antiphlogistic treatment having been premised. In such case the change from the purulent to the frothy mucous expectoration, and the rapid yet easy diminution of the latter, together with the suppression of the cough, are palpably attributable to the tonic qualities of the quinia. The experience of my friend Dr. J. Whyatt Crane, at

the St. George's and St. James's Dispensary, goes to show similar success in the same affection. In several cases of acute bronchitis, I have given it in combination with tartar emetic: twice it was eminently beneficial, being administered to individuals advanced in age; but in three or four other instances, though not hurtful, the combination did not prove so efficient as I believe the exhibition of tartar emetic alone, and subsequently of quinia would have done. The cases in question occurred in younger and more robust persons, which probably accounts for the want of success.

Dr. Copland once mentioned to me a curious consequence of the combination of quinia with aloes: he finds that the addition of a single grain of aloes to two or three of quinia, is sufficient to act freely upon the bowels. His observation of this has been repeated. It is a fact of some importance, particularly in those cases where the necessary employment of purgatives is yet rendered precarious by the excessive debility of the patient.

In the 5th vol. of the Medical Gazette is a communication from Dr. Harty, in which he illustrates the effects of quinia in accelerating mercurial action. He found that both a smaller quantity of mercury, and a shorter space of time, sufficed to produce salivation, when combined with quinia. He even maintains that ptyalism may be produced in such a case by the use of quinia alone.

In the 10th vol. of the same Miscellany, Mr. Middlemore states that his practice has induced him to give a preference to quinia over iodine in the treatment of strumous affections of the eyes.

There remains another alkaloid substance, found in 1833, in the yellow cinchona, by MM. Henry and Delondre, to which M. Magendie does not allude. This is QUINODINE. As a hydrate it is white, crystallizable in prismatic needles, and melts into a mass of resinous appearance, only at a much higher temperature than that required for the fusion of quinia. It is extremely bitter, especially when dissolved in alcohol, or an acid. Alcohol of the sp. gr. of 963 holds it, and

on evaporation leaves it in crystals, with a little resinous matter, which is removed by washing with alcoholic water. These crystals effloresce, turn the syrup of violets green, and restore turnsol paper, reddened by an acid. They combine with various acids, and form pearly salts, crystallizable like those of quinia, and precipitable by soda. It resembles quinia in its form, small degree of volatility, its solubility in alcohol much diluted, and its saline combinations. It differs from quinia by its greater tendency to crystallize, and its being less fusible, its being soluble in sulphuric ether, and by the property it has in its resinous state of assuming in the air the form of crystals, when washed with alcoholic water.

Quinodine is found in the yellowish waters which float on quinia and cinchonia, after the distillation of the alcoholic tinctures, and the preparation of quinia. It is accompanied by a yellow substance, supposed to be an acid.

I am not aware whether the promise of the discoverers to publish the process for obtaining quinodine pure has ever been fulfilled.—*Tr.*]

VERATRIA.

We are again indebted for the discovery of this new alkali to the labours of MM. Pelletier and Caventou. These indefatigable chemists having observed that all the individuals of the *veratrum* family possessed a very acrid taste, and exercised a similar action on the animal economy, were led to inquire whether some common principle did not pervade the whole of these plants. An analysis of the *veratrum sabadilla* confirmed their conjectures, and they separated from it an acrid principle which they also found in succession in the bulb of the *colchicum autumnale*, and in the *veratrum commune;* to this they gave the name of *veratria*.

* Annali Universali di Medicina, Juillet et Août, 1825.