On the contrary, the diminution of the discharge, and the slight constitutional disturbance which they produced, go to show that iodine injections into the pleural cavity may be safely used, and possibly, in some cases, with advantage.

The canula was not uncomfortable to the patient until it had remained in his side for more than three weeks. It was easily kept *in situ* by means of adhesive plaster—not by bandages.

The action of the fluid extract of veratrum viride as sedative to the circulation was evident. It produced some nausea; and, I thought, was followed by increased languor and weakness. I could see no evidence of curative action from it.

CONCLUDING REMARKS ON INTERMITTENT FEVER, WITH SUGGESTIONS CONCERNING THE VALUE OF EMETICS.

[Communicated for the Boston Medical and Surgical Journal.]

BY EDWARD JENNER COXE, M.D., VISITING PHYSICIAN, CHARITY HOSPITAL,
NEW ORLEANS.

IN the preceding remarks on this subject, as well as in former articles in the JOURNAL, my predilection for the more frequent employment of emetics in various diseases has been clearly shown. The more frequently I use them, the more convinced am I of their real utility—almost invariably displayed in the forming stage of most diseases, and in the different stages and forms of that under consideration. Various reasons could be assigned for the less frequent use of this class of remedies, at the present day, than formerly was the case, or than they really deserve; nor would it be a difficult task to fill pages with extracts, from many writers of eminence on the practice, to prove the great confidence reposed in the curative power of emetics. But fearful of trespassing too far on your pages, and the desire of confining my remarks to observations deduced from bed-side experience, in reference to the perfect safety, and the less risk incurred from the use of an emetic, than is found frequently to result from the action of other remedies, preclude their introduction at this time, and force me to forego such valuable support in favor of my views.

If I may be allowed to judge of the well-marked and positively curative effects resulting from the use of emetics in the innumerable cases in which I have used them, in a great variety of diseases, they would be placed at the head of all remedial agents, for their prompt, decided, and immediate curative power, as well as for placing the system in a condition better adapted to the reception of subsequent remedies.

It may not be amiss, while advocating the importance and safety of emetics for the successful treatment of intermittent fever, as an adjunct to other remedies, to remark, that, while in all cases the use of one will prove beneficial, in some it may not be abso-

lutely required, or certain symptoms may contra-indicate its propriety at the time; but, in those of long standing, and complicated in various ways, the necessity of resorting to one is considered proven, as far as my observation has extended. Under the impression that the mode by which I produce vomiting, differs materially from that generally adopted, to which is assigned one reason for the non-occurrence of pain, spasm, or other inconvenience, it is needful to notice the particulars.

In presenting the formula of the preparation first used, as a prelude to the real emetic, which is continued subsequently for several days, more particularly if the liver has been much implicated, be it noted that the quantity of each article is necessarily varied, to meet existing indications, though in general the following is employed. R. Nit. potassæ, ℥iii.; bi-carb. sodæ, ℥ii.; aquæ destillat., ℥v.; syrup. ipecacuan., ℥iij.; tr. opii camph., ℥iv. In some cases, the syrup of morphia is substituted for the paregoric. The dose varies according to circumstances—being from two to four tea-spoonfuls every hour for from two to four times. To the last dose is added four ounces of warm salt water, in which there is mixed one tea-spoonful of ipecacuanha and from four to ten grains of cayenne pepper. This being swallowed, as soon as efforts to vomit appear, two or more pints of warm salt water are given as rapidly as possible, and it is rare that profuse vomiting does not occur, although, in a few cases, that quantity has been retained without causing vomiting, while it has acted freely on the bowels, without causing serious inconvenience from the temporary extra-purgation. The vomiting being over—causing only that inconvenience inseparable from the act itself, known to all to be disagreeable, and, in my opinion, the only rational objection to popularizing the habitual use of emetics in various diseases—a mustard and cayenne poultice, strong or weak, as may be required, is applied to the abdomen for various reasons, one being its power to control or prevent spasm, or pre-existing irritation, or inflammation. When removed, one of flax-seed meal generally supplies its place, and is kept on as long as the nature of the case may seem to demand. At the expiration of three hours, the preceding mixture is given, in the dose of one or two tea-spoonfuls every one or two hours, for several days, with or without the usual tonic remedies, necessarily depending on circumstances. At the proper time, after the action of the emetic, should it be requisite to act yet more on the bowels, a large injection of strong salt water, preceding or followed by two modified blue pills, or a dose of calomel, often conjoined with one of Dover's powders, are given, the last generally at bed-time. It is not unusual to conjoin with the last dose, portions of the sulphate of cinchona, or quinine, and powdered nitrate of potash. Purgatives, or mild laxatives, with the nitrate of potash mixture—to which, when first prepared, there is frequently added three or four drachms of Fowler's solu-

tion of arsenic—are continued for several days, or until I may consider the proper time for the exhibition of quinine, and other tonics, to have arrived.

Before noticing the formulæ of the different anti-periodics and tonics, which have been used, it may not be amiss to cursorily notice the diet allowed to my patients for the first few days. Gruel, arrowroot, and soup, are only allowed, and in some cases in specified quantity, until the system may be considered ready for the full diet of the hospital. It may not be unworthy of remark, that to all of the patients admitted into my wards, without an especial medical reason for the contrary, not one drop of alcohol or malt liquor is allowed, and although the habits of many admitted frequently induce them to ask for the former, it is uniformly withheld, and, to this day, in but three instances has the least inconvenience resulted from such forced temperance. To supply the craving for such drink, and at the same time to invigorate the systems of all, there is prepared, in both wards, a pitcher of a tonic infusion, made of Peruvian bark, Virginia snakeroot, quassia, colombo, wild cherry bark, &c., ground and mixed. *Nolens volens*, a wine-glass is given by the nurse three or four times a day to all for whom it has been ordered. I am certain that this tonic drink is in all respects more efficient than alcohol, or porter, to strengthen my patients, and enable them to leave the wards without much fear of a relapse.

Assigning as reasons for my conviction of the propriety and necessity of the more frequent use of emetics, the following facts are adduced. The most frequent result of an emetic is the ejection of undigested food, mixed with more or less of black, green, or yellow bilious secretions, the quantity of such matter being frequently surprisingly large. It has been of occasional occurrence, that, not having deemed it necessary, in a case, to give an emetic, from the apparent mildness of the symptoms, in the course of one or two days, notwithstanding the use of purgatives and injections, unexpectedly there would be thrown up a large quantity of bile, more frequently of a blackish or dark green color, when, even at that late period, an emetic of ipecac and warm salt water being given—which it always is—a great quantity of dark-colored bilious matter would be ejected. In some cases, where the tongue has presented almost a natural appearance, without any well-marked symptoms of aught but malaise, but in which I was convinced an emetic would put all straight, upon its free action a large quantity of dark bilious matter has been thrown off, followed by an immediate restoration to a natural feeling, and the desire to be discharged and go to work.

The above facts, which defy contradiction, suggest a plain and pertinent question for the consideration of those who may not have fully looked at the subject, not only as to the positive benefit of an emetic, but of its greater safety and superiority to the more

VOL. LXI.—No. 13**

common and agreeable purgative, mostly in pill form, in respect to the actual amount of irritation or inflammation of the mucous membrane of the alimentary canal, immediately or remotely. By comparison, it will be seen that, by an emetic, the contents of the stomach are removed upward, through a distance of from ten to fifteen or twenty inches, or thereabouts, over a mucous membrane unaffected in any manner, and little disposed to become so in such cases. After the full operation of an emetic, which does act powerfully on the liver, and frequently causes an evacuation of the bowels, should there be a necessity of acting still more on them, an injection, or any mild remedy, will be found sufficient in most cases. Contrast the probable effects of the operation of one or more cathartics, to evacuate the stomach and bowels, which it is presumed few will deny the necessity of doing at the commencement of most diseases, be they what they may. In the first place, it is impossible for any one, *a priori*, to tell with certainty what number of doses or what quantity of medicine will be required to accomplish the object desired, as is well known to all. Then, whatever may be given, it, with the contents of the stomach and bowels, must, to be evacuated, pass through a distance of about six times the length of the body of the individual, and over a mucous membrane, if not in a state of irritation or inflammation, most certainly prone at any moment to have one or both aroused into action. Can any one doubt, with such facts presented, either the propriety and necessity of emetics, or that the retention in the stomach of such foreign matter, or its forced passage through the bowels, must add to the discomfort of the patient, very materially augment, if not produce inflammation, protract the duration of the disease, and be far more calculated to do injury than can possibly result from the action of a single emetic, whose effects are most generally over in fifteen minutes.

I will conclude these unavoidably prolonged remarks, on subjects to my mind most important, in a practical bed-side point of view, by presenting the more active formulæ of anti-periodic or tonic remedies, which, having largely used in a great number of cases, I do think I have the right to speak of with confidence. R. Zinci sulph. pulv., 3ss.; quinin. sulph., ʒi.; pulv. capsici, ʒi.; pulv. cinchona rub., ʒi. M. Dose, one half to one teaspoonful three times a day. R. Zinci sulph. pulv., 3ss.; quinin. sulph., ʒiss.; tr. capsici, ʒiv.; tr. opii camph., ʒvi.; tr. rhei et sennæ, ʒvi.; syr. ipecacuan., ʒiv.; tr. quassia, ʒij.; tr. cinchon. comp., q. s. pro ʒviij. M. Dose, one half to one teaspoonful three or four times a day. During the month of September, the number of emetics given in my two wards was about eighty, as I find by referring to my book of prescriptions, In not one instance was aught but benefit received.