THE RAPID CURE OF AMOEBOIC DYSENTERY AND HEPATITIS BY HYPODERMIC INJECTIONS OF SOLUBLE SALTS OF EMETINE.

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Ipecacuanha is a drug with an interesting past and a brilliant future. The Brazilian root was first brought to Europe by Piso in 1658, and was successfully used by Helvétius in the treatment of Louis XIV, and sold as a substitute for opium by the French apothecaries. It was used for dysentery, chiefly in small doses, by Tynning and many other Anglo-Indian physicians, but it was not until 1858, exactly two centuries after Piso, that Surgeon E. S. Dockier, I.M.S., introduced the use of large doses (60 grains two or three times a day) of powdered ipecacuanha in the treatment of severe dysentery in Mauritius, with the remarkable result of reducing the death rate to the disease from an annual rate of 10 to 18 per cent. to only 2 per cent. His excellent results were rapidly confirmed by numerous physicians in India, but it was not until 1860 that Dockier's great services to humanity was tardily rewarded by the Government with a gratuity of £1400. Maclean and Norman Chevers in 1866 advocated the use of ipecacuanha in the treatment of acute hepatitis, and two or three days later the pendulum again swung in the opposite direction, and the drug was largely replaced by ammonium chloride in hepatitis and by salines in dysentery, chiefly as a result of the success of the latter in very early and mild attacks of colitis. Indeed, only a few years ago a committee of London pharmacologists actually advised the omission of this invaluable drug from the medical panniers to be taken on field service by the army in India, so far had the Brazilian root fallen in the estimation of the medical profession. During the last few years ipecacuanha has once more gained ground, mainly on account of Sir Patrick Manson's advocacy of the latter in dysentery, and of the writer's success in the treatment of early acute amebic hepatitis.

Doubtless, the principal cause of the vicissitudes of ipecacuanha is the production of very disagreeable and exhausting nausea and vomiting by the large doses which is essential to obtaining its full curative effects. This serious drawback is only partially overcome by the present methods of giving the drug in salol or kaolin coated pills, as trimetaphosphate, chloral hydrate, or ammonium chloride to check vomiting. Last year Vedder showed that emetine, the principal alkaloid of ipecacuanha, has the power in high dilutions of destroying amebae in both cultures, although a much smaller percent. than that of the alkaloid which most recent authorities believe has not yet been cultivated. I have, therefore, tested the effect of the strong alkaloid on A. histolytica in dysenteric stools. I have found that, on placing a piece of mucous containing numerous active amebae in normal saline solutions of this salt, the pathogenic organism is immediately killed and materially altered in its microscopic appearances by a 1 in 10,000 solution, while after a few minutes they are rendered inactive, and apparently, killed, by as weak a solution as 1 in 100,000.

It is obvious to try if the powerful alkaloid can be safely administered hypodermically in the treatment of amebic disease, and have obtained such striking results in a few patients that it seems to be advisable to make them known to others before the ensuing rainy season of widely prevalent amebic disease. The following three cases, which have been selected because in none of them could the patients take ipecacuanha by the mouth, will suffice for this purpose, although much further experience will be necessary before the full value and limitations of the method can be ascertained.

CASE I.—Acute Haemorrhagic Amebic Dyenstery, in a Patient who could not retun Ipecacuanha, Rapidly Cured by Emetine Hydrochloride.

A Japanese female, aged 29, was admitted to the cholera ward under a history of diarrhea and sickness for three days, with four or five black stools daily, and severe epigastric pain. Specific gravity of the blood 1052, pulse fair, temperature normal. A small amount of blood was passed soon after admission, but I could find no amebae in it. Castor oil mixture and bismuth ordered.

Second Day.—Three stools containing black blood passed during the night. Severe epigastic pain and vomiting of glairy mucus, without blood, still present. Calcium chloride given. By the evening four large black blood stools had passed; the pulse was feeble, restlessness and deep sighing respiration were present, as well as the smell of a Duodenal ulcer was suspected, and 20 minutes of tincture of opium ordered.

Third Day.—At 7.30 a.m. the condition was still grave, but there was less restlessness. A large black haemorrhagic stool had just been passed, in which I noticed a few yellow pus-like amebic colonies, and at once suspected amebic dysentery. The reverse colon could now be felt as a thickened and tender mass in the midline above the navel. Chloral hydrate, 3 grains, was ordered. On examining the stool microscopically I found numerous large amebae having the characters of A. histolytica. I ordered the Dover's powder, but found that the patient had ipecacuanha with 5 of tannic acid was given, but this also was left unchallenged, and the position became critical. As I had recently obtained emetine hydrochloride from England, I dissolved some in sterile normal salt solution, and at 3.50 p.m. injected hypo- dermically the equivalent of 15 grains of ipecacuanha. This small dose was used for the first trial. No local irritation was produced, while, to my surprise, neither nausea or vomiting ensued. At 7.30 p.m. one-third of a grain more was injected, which also produced no ill effects, not even temporary depression of the pulse. The condition of the patient has been rapidly improving since, the amebic dysentery is nearly cured, and the patient will be discharged in a few days. The remarkable rapid recovery from the very grave haemorrhagic type of amebic dysentery in this case can, I think, be safely attributed to the hypodermal administration of the active principle of ipecacuanha.
CASE III.—Acute Hepatitis, in a Patient who could not take Ipecacuanha by the Mouth, Rapidly Cured by Emetine Hydrobromide Hypodermically.

A European lady who had been suffering from fever and pain over the right side for two days had had an attack of dysentery some two months before. Widal tests for typhoid and paratyphoid were negative. Ipecacuanha was given by the mouth for three days, with the result that the hepatic pain became less and the temperature declined to a lower level.

On the third day, nausea and vomiting had subsided, and she refused to continue the ipecacuanha, and during the next three days the temperature returned nearly to reach 103° F. in the evening, and the hepatic pain recurred. At this period I was asked to see her in consultation, and injected one-third of a grain of emetine hydrobromide hypodermically. The temperature fell steadily during the next twenty-four hours to 100° F., and the pain had also disappeared. I now gave a second injection of half a grain, equal to 0.5 grains of ipecacuanha. No vomiting, and previous nausea, was caused by these doses, and her medical attendant reported to me that she was much better.

Four days later I was again asked to see her, as the temperature had once more risen to 103° F., and it was feared that liver abscesses would result if the disease was not quickly cured. I repeated the former doses on that and the following day, and the temperature declined steadily, to reach the normal in three days, when two more similar doses were given to guard against any recurrence, and no more fever or other trouble has occurred.

Emetine hydrobromide may also be given subcutaneously, but is not quite so soluble as the hydrochloride.

In view of the strikingly good results obtained in these three cases, which are illustrative of the most important types of amoebic disease, and in each of which the administration of ipecacuanha by the mouth was impracticable, I venture to think that no apology is needed for bringing this method of treatment to the notice of physicians in the tropics without delay. Should further results fulfill the great hopes raised by the successes above recorded, it will be difficult to exaggerate the boon which will be conferred on the sufferers from the intractable and deadly amoebic form of dysentery and its very serious hepatic complications.

REPEATED BREECH PRESENTATIONS.

I read with interest Dr. Iloth's letter, re breech presentation.

Last year I was called in to see a woman in labour (I had never seen her before), and on arrival I found her sitting on the edge of the bed suffering from a great fit of depression. On inquiring the cause, she informed me that her three previous confinements had been breech cases, the children dying immediately after birth; she also said she felt convinced that the coming child would be a breech presentation and would die like the rest, hence her depression.

On examination, I found that there was a breech presentation, and, to cut the story short, I delivered her of a male child, which, after some artificial respiration, took to life with great gusto, and is now as fine a baby as it is possible to find. The patient informed me that her first youngster (now some 8 years old) was a normal head presentation, but that all the others were breech presentations.

The test for KCNS in the saliva was interfered with if the man had been eating any sugary material. All persons working before furnaces developed a red line on the gum, and on this red line the lead was readily deposited. What was the origin of this red line? Was it inflammatory? Prevention could be brought about by cleanliness as to food and other habits. Cigarette smoking ought to be stopped, and chewing was most injurious. The rotten teeth should be removed, as they tended to give rise to gastritis. A preliminary gastritis by the accompanying increase of absorbing surface tended to produce absorption of lead, and so hastened an "attack." The plentiful supply of fruit last summer increased the number of cases of lead colic. The blue line was nearly always preceded by a red one, which was always found with furnace men. The best treatment for the early stages of plumbism was by means of the internal administration of calcium permanganate.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

Swansea, April 25th, 1919.

Dr. Biddle, President, in the Chair.

Dr. Arbour Stephens read a paper on plumbism. He said that, as appointed surgeon under the Factory Act for lead processes, he had had considerable opportunities of observing men employed at lead works, their dangers, and the consequences. The symptoms were more or less classical and fairly well known. One symptom he would draw attention to, because it was unreported but had been observed by himself, was a tenderness of the skin under the lower third, the upper part being practically free from such tenderness. The difficulty was to decide in a large number of cases what part alcohol had played. Mode of admission: (1) Skin, said to have occurred by the use of cosmetics; (2) lungs, which Dr. Goadby has tried by experiments to prove is the main one, but with which Dr. Arbour Stephens could not agree; (3) stomach, into which lead got by eating food with dirty hands, chewing, cigarette smoking, and suchlike methods. The foremen and undermanagers never got plumbism. The test for KCNS in the saliva was interfered with if the man had been eating any sugary material. All persons working before furnaces developed a red line on the gum, and on this red line the lead was readily deposited. What was the origin of this red line? Was it inflammatory? Prevention could be brought about by cleanliness as to food and other habits. Cigarette smoking ought to be stopped, and chewing was most injurious. The rotten teeth should be removed, as they tended to give rise to gastritis. A preliminary gastritis by the accompanying increase of absorbing surface tended to produce absorption of lead, and so hastened an "attack." The plentiful supply of fruit last summer increased the number of cases of lead colic. The blue line was nearly always preceded by a red one, which was always found with furnace men. The best treatment for the early stages of plumbism was by means of the internal administration of calcium permanganate.