every portion that looked suspicious. Then he applied a Volkmann's spoon vigorously. Then pure carbolic acid was rubbed in, and the whitened area again scraped away; a strong solution of corrosive sublimate was applied, and an antiseptic dressing put on. The child recovered, but naturally a plastic operation had to be done on account of the deformity.

My boy did not seem fit for any such proceedings, and did very well without them.

3. As to the use of alcohol—Being almost in despair about him, I gave him a much larger amount of whisky than I am in the habit of allowing, and am convinced it did him a very great deal of good. The boy was fourteen years old, and for ten days took half an ounce of whisky every hour, night and day—in all, six pints. At the end of that time it was lessened in amount, and finally stopped. There was never any trace of intoxication.

4. As regards the stench—I think the pure eucalyptus oil dropped on the slough was the most successful agent in overcoming the stench.

ART. VII.—*A Case of Acute Diphtheritic Dysentery; Recovery.**

By R. PERCY JONES, B.A., M.D.; Univ. Dubl.

IN discussing the disease known as dysentery, we are discussing no new disease. The Greek word is classical; a passage in Herodotus clearly alludes to the dysentery of camps, occurring in the army of Xerxes, during its retreat from the invasion of Greece. Hippocrates, that master of ancient medical lore, correctly refers to it as ulceration of the intestine. It is also used by St. Luke, himself a physician, writing in the Acts of the Apostles—*πυρετοῖς καὶ δυσεντερίᾳ συνεχόμενον*, &c. Pathologists of the present day are mostly agreed as to the processes concerned in the production of this disease. Virchow designates these respectively as “catarrhal” and “diphtheritic.” This latter, known as red dysentery, which is of a sloughing or necrotic nature, is the one we are concerned with at present. One word in explanation. This term, diphtheritic, has now two meanings, which must be carefully distinguished from one another. Diphtheria is described as a specific disease, generally affecting the throat. But in Virchow's sense, “diphtheritic” inflammation of a mucous membrane, or of the skin, has not necessarily anything to do with that

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disease; it is a morbid change of a particular kind, probably dependent upon intense irritation of the part. Diphtheritic, in Virchow's sense, does not imply the presence of a false membrane, as Hewson writes—"Muco penitus absterso, nulla membrana superficiem quæ tegetet inventa est"—but it does imply a putrid, destructive, more or less necrotic process. The essential pathological change is an atrophy of the coats of the bowel, the glandular structures having disappeared, and the wall being so attenuated as to be transparent.

Whilst acting as *locum tenens* for a former principal, I met with the case which led me to select this subject for my thesis, and it furnishes a striking illustration of the value of ipecacuanha in large doses, and likewise corroborates the experience of the most competent observers—viz., that opium, if systematically given, is injurious. I have now met with four cases of sporadic dysentery (in England) in the last three years, and three of them proved fatal on the opium treatment. Before commencing my notes on the case, I must state that they are not, perhaps, quite as full as I could wish, as the patient was ailing exactly a fortnight before I saw him, and, as is generally the case, the characteristic symptoms did not develop for some days, and thus the case was very naturally looked upon as one of ordinary diarrhœa, and treated accordingly. But the patient's mother gave me the details very clearly, of course minus those of temperature, pulse, and an accurate description of the character of the stools. During the time he was under my observation the temperature never rose above 100·6° F.

CASE.—F. V., aged eighteen, living in St. Alban's, a shoemaker by trade, and hitherto in good health, was taken sick on Thursday, April 12th, 1894, with a general feeling of malaise and uneasiness about the abdomen with diarrhœa. On the following day the uneasiness in the abdomen turned to pain, and the diarrhœa continued, but stopped suddenly in the afternoon. "He continued queer" until the 16th, when the pain came on again.

17th.—Took half an ounce mag. sulph. in early morning; in great pain; took another half ounce of mag. sulph. at 1 p.m. His mother came to the surgery at night and told Dr. Morison the symptoms. He did not see the boy, but sent a mixture containing tinct. chlorof. et morph. and sod. bicarb.

18th.—Bowels moved at 6 a.m.; Dr. Morison saw him at 12 midday.

19th.—Still in great pain, with profuse diarrhœa. (Whether this diarrhœa was increased by the ounce of salts he had taken the previous

day, or was the result of the gradually increasing dysenteric poisoning, I am unable to say.) Put on pil. opii gr. j. and ext. bellad. gr. $\frac{1}{2}$ every four hours.

21st.—Sickness set in, and the motions became bloody and very offensive. His mother described them to be “like bits of flat burnt paper swimming on the top.”

22nd.—The motions appeared to be all blood.

23rd.—Given ten grs. of bismuth subnit. in mixture for the sickness every fourth hour, alternating with the opium.

26th (Thursday).—I saw him for the first time at 10 20 a.m. Temp. 98° F.; pulse, 120; dribbling; very anæmic; emaciated; stools horribly offensive, consisting of large masses of muddy slime, floating in blood and urine. Tenderness on pressure over the cæcum and ascending colon, and markedly so over the lower edge of the liver, which made me keep in view the possibility of hepatic abscess. Tympanites not excessive. I advised continuation of the same treatment (viz., a pill containing opium gr. j. and ext. bellad. gr. $\frac{1}{2}$, alternating with bismuth subnit. gr. x. every four hours).

27th.—T. 98°; P. 100. Had passed a copious motion at 11 30 the previous evening; had slept but little; much weaker; very anæmic; eyes sunken.

28th (10 30 a.m.).—T. 97°; P. 120; very feeble; no motion for thirty-five hours; quite conscious, but somewhat slow in recognising his relations; called suddenly to see him at 5 45 p.m., having passed the first motion since 11 30 p.m. on the 26th (i.e., forty-two hours) and subsequently fainting. T. 96°; P. 140; very feeble; ordered brandy, two ounces every second hour, and left him, determined to try the effect of large doses of hippo as a last resource. I sent a powder of gr. xxx., to be taken in halves and with as little fluid as possible to wash it down with, and ice to suck if his thirst was great. The first half he vomited up directly, but the second half he kept down for about one hour. Saw him again at 10 p.m.; T. 96°; P. 144; dribbling; his finger-tips bluish, and hands quite cold. I injected a syringeful of ether, which at once had a most beneficial effect, and, increasing the amount of stimulants, I left him for the night, with but the faintest hope of seeing him alive again.

29th (Sunday, 8 15 a.m.).—Had had no sleep, in no pain, but had rallied somewhat after having passed two or three copious motions, horribly offensive. At 10 15 a.m. I gave him 25 grs. hippo, dissolving the powder with the aid of min. xv. of ac. sulph. dil. and some tinct. aurant, and, having made them into four somewhat bulky pills, I rolled them in butter, and they slipped down quite easily, one after the other, with a sip of water after each. I ordered perfect quiet, and a turpentine stupe to the abdomen in two hours' time, and a little iced brandy for the

thirst, but not to exceed four ounces in the three hours immediately succeeding the dose. At 7 45 p.m. I saw him, and was astonished at his decided improvement. The ipecac. had stayed down for three hours, after which he vomited freely and passed large quantities of bloody stools; he then broke out into profuse perspiration, and slept for nearly four hours, waking up refreshed, his temp. being normal and pulse 84, and much fuller. The change was little short of miraculous. I gave him another 20 grs. of ipecac. in pills as before, but this time I injected gr. $\frac{1}{3}$ of morphia ten minutes before giving him the pills.

30th.—Still improving, the morphia having given him a good night's rest, in addition to preventing any undue influence of the emetin; diarrhœa still continuing.

May 1st.—Much better; motions containing far less blood.

5th.—I gave him 15 grs. of ipecac. every night since the 1st inst.; had not detected as yet any formed fæcal matter; allowed him toast and weak tea, and a lightly boiled egg. His diet since the 26th April, the day I first saw him, had consisted of peptonised milk (Benger's liq. pancreaticus), peptonised beef tea, bovinin and brandy, all at stated intervals.

15th.—I heard from Dr. Morison that he was up and out, his motions practically normal, but still extremely weak.

Remarks—The origin of sporadic dysentery is usually attributed to the ingestion of irritating articles of diet—*e.g.*, unripe fruit, decomposing meat, bad water. In the above case I could obtain no such cause, and the water in St. Alban's is above suspicion. Nor could I attribute it to that commonest of all causes in most diseases—*viz.*, cold; although one is so apt to fall back upon it, when one cannot detect any tangible cause. It would appear incorrect to attribute an inflammation of the cæcum and colon to irritating ingesta, for they would be sure to set up an active peristalsis, and so expel the irritant; and it is hardly likely that the ingesta would leave the small intestine unaffected. Yet it is well known that such is the case in poisoning by bichloride of mercury, in which violent inflammation and even ulceration of the cæcum and colon have repeatedly been observed, although the small intestine had escaped *in toto*. There is some reason for thinking that one factor in the causation of dysentery may be habitual torpidity of the large intestine. Virchow lays stress on the fact that the cæcum and flexures of the colon, which are particularly liable to be affected by the disease, are also especially apt to become loaded with fæcal masses. And it follows that if there be any irritant amongst the intestinal contents, its retention

must be favoured by the imperfect peristalsis, and thus favour its action. And Annesley long ago pointed out that in India the disease often commences with the characteristic signs of morbid accumulation in the large bowel. One important symptom—and according to Dr. Woodward the most characteristic—was, in my case, absent from first to last—viz., tenesmus; but it is well known that this symptom is absent when the cæcum and upper part only of the large intestine is diseased, as was undoubtedly the case here.

As regards treatment—I am firmly convinced of the efficacy of ipecacuanha, though much has been said to the contrary. One thing is certain: if used at all, it must be used in large doses—forty, or at least thirty grains—to be repeated according to the effect on the patient. In Dr. Maclean's hands, in India, it has proved of enormous value, and it was due to the perusal of one of his cases—that of a lady in Calcutta, who was so exhausted that her voice was scarcely audible, and who, after the third dose of twenty grains, given at intervals of eight hours, was out of danger—that I was led to try it in this case, and to that, and that alone, the patient owes his life. The best method of administering this nauseous remedy is by first giving a hypodermic injection of one-third or one-fourth grain of morphia, and then making thirty grains of the powder into four large pills, with the aid of about min. xv.-xx. of acid. sulph. dil., and then rolling them in butter, so that they slip down quite easily, and the patient does not even taste them. But opium, if systematically given, is worse than useless. How the ipecac. acts is still a mystery; the emetin is the active principle, but I firmly believe that there is some other principle—antiseptic, maybe—as yet unknown, but which, with the light of increasing chemical science, we shall discover ere long. Finally, then, we may sum up the salient features of this interesting and instructive case as—

1. The apparent absence of any known factor in the causation.
2. The downhill course on opium, whilst *systematically* given.
3. The almost miraculous effect of the ipecacuanha.