a decided overgrowth of nuclei around the sweat glands and vessels of the skin, the latter condition corroborating Rasmussen, who believes the essential element in the changes in the skin to consist in this marked development of lymphoid cells, especially in the peri-vascular sheaths of the minute bloodvessels of the skin and subcutaneous tissue.

TWO CASES OF INTUSSUSCEPTION OF THE BOWEL.

By F. R. HUMPHREYS, M.R.C.S., L.R.C.P. LOND.

CASE 1.—Edwin W—, aged two years and a half, was taken ill at 11 A.M. on Jan. 21st, after a good breakfast at 8.30 A.M. Sickness, followed by diarrhoea (with a streak of blood in it) and abdominal pain, were the first symptoms. The pain was intermittent, but very frequently repeated, and the child turned over on to his stomach on each recurrence, seeming to be in considerable pain. He was first seen early in the afternoon. He was then vomiting everything that he took, while at the same time he was complaining of hunger. The pulse was 118; respiration thoracic, 32; temperature 99.2°. The liver dulness extended half-way to the umbilicus. The abdomen on the right side was rigid and dull, and there was a lump to be felt about two inches to the right and one inch below the umbilicus. However, I was assured that there had been a considerable flow of blood with the urine, so that the case, with this point strongly and clearly impressed on me by the friends, looked like one of renal trouble. At 9.30 P.M. I was told that the previous blood came from the bowel, and that since then about two ounces and a half of blood (which I was shown) had also come from the bowel; this was nearly pure blood, and there were no clots. On examination of the abdominal tumour previously noted, distinct peristaltic movement was noticed in it, though it did not appear to have altered its position; it was about the size of a large walnut. On examination of the urine, there were plenty of phosphates, but no albumen. The diagnosis, therefore, was that of intussusception. I attached a No. 8 gum-elastic catheter to a Higginson's enema syringe, and injected about eight ounces of warm water into the rectum, passing the catheter about three inches in, when, after a little difficulty with the last half-ounce, something seemed to give, and, the child moving, the catheter slipped out; only slight force was used. On examination of the abdomen, the lump had disappeared, and the colon seemed to be full of water. Chloroform was unnecessary, the child being very good. A pad and bandage were then placed on the abdomen, the pad being over the right iliac fossa. He returned about four ounces of water, slightly blood stained, on being placed in a chair a few minutes later. Next day (the 22nd) I was told he had had a good night, there having been no sickness, pain, or passage of blood, and the bowels were easily and naturally open. The abdomen was rather tender, but no lump was to be felt, and the child appeared to have nearly quite recovered. Later in the day pain came on again, the right knee being drawn up and the head and body thrown back during the paroxysm; but, unlike the first attack, the child was not restless. There was dulness and tenderness at the spot where the tumour had originally been noticed. Temperature 99°. This pain continued at short intervals till Feb. 9th. There was sickness on Jan. 25th and 26th, and on the 27th Mr. Charters J. Symonds saw him with me. He considered the diagnosis a correct one, and thought there was probably some localised inflammatory affection remaining. When seen in the evening, there was a constant gurgling in the right iliac fossa. He was given increasing doses of opium up to seven minims and a half every four hours, but without any effect on the pain. A glycerine enema, suggested by Dr. Fly Smith, was then (Feb. 3rd) tried, and seemed to act well, both in emptying the rectum and relieving the pain. On Feb. 8th the child had fallen off a great deal from the constant pain, and had become very pale and weak. He had also cut two upper molars. On the 10th the pain had left him. A light fish dinner was ordered, the child craving for it. He had an attack of erythema fugax on March 1st, but had nearly recovered from that on the 3rd. He had been taken for a good long walk, and appeared quite well.

Notes by Mr. CHARTERS J. SYMONDS.—The unusual

feature in this case was the persistence of pain after the reduction. This pain, moreover, was situated just at a point where the lump was observed to have disappeared, and was periodic in character, being evidently determined by peristaltic action. It appeared possible that the intussusception had been incompletely reduced, the caput cæci when threatened by congestion having a tendency to retain the depression. As opposed to this view was the absence of gurgling or the rising of a coil when the pain occurred. The only other suggestion in explanation of the prolonged symptoms was the injury inflicted by the strangulation. That this was severe was proved by the escape of so large a quantity of blood; and to the swollen condition remaining, and the succeeding local enteritis, or rather colitis, must be attributed the continued pain.

CASE 2.—In this case the patient was an infant only eight and a half months old. It was first seen on Aug. 9th. The history given was, briefly, that it had been in perfect health up to 3 A.M. on the 8th. At this hour it was seized with vomiting and pain, and a few minutes later passed a bloody stool. From that time up to 11 P.M. on the 9th there was incessant vomiting and constant flow of blood-stained mucus and serum. Once a little solid darkish material passed. When seen, the condition was as follows. The child was a fine one; it had been brought up at the breast. It lay on its back, with the knees drawn up, but every now and then put itself in the opisthotonos position, or one approaching it. It looked drawn and anxious. The pulse was full; the tongue red. Examination of the abdomen showed no change apparent to the eye; to the touch there was resistance under the right rectus midway between the umbilicus and pubes, and dulness on percussion. The abdomen was generally tender, but especially at the dull area. Under chloroform the diagnosis was no clearer. Per rectum the bowel was empty as far as the sigmoid flexure. Nothing like a tumour was to be made out anywhere. In spite of this the signs pointed to intussusception; so, letting the child get over the chloroform first, I injected a pint of water with a Higginson's enema syringe through a No. 8 catheter passed well into the rectum, and at the second attempt the water was retained. Dissolved in it was a little boracic acid, as the discharges smelt very foul. After injecting slowly about sixteen ounces the child suddenly stopped crying and appeared to watch attentively the sensations it was experiencing in its abdomen, and the expression became relieved. I injected about four ounces more to make sure of the reduction. The blood-flow ceased at once. The vomiting went on for twenty-four hours longer, the temperature rising to 101.2° F., but most of this disturbance was accounted for by the child being in the act of cutting its teeth. It made a rapid and perfect recovery.

These cases appear to illustrate the ease with which intussusception can be managed if diagnosis is early and treatment prompt. A consideration of the mechanical problems involved in the process of reduction of an intussusception seems to show the following results. If we take the invaginated portion as wedge-shaped, it is evident that the base of the wedge may be considered as pointing upwards in the direction of the stomach or downwards towards the rectum, according as the invaginated part is swollen sufficiently to dilate the intestine outside it, or as it is smaller than its own neck where the compression takes place. If the wedge's base be directed downwards, then, since the intestine is fully dilated, and since a force applied to a mass of liquid under such circumstances acts equally in all directions, then a considerable part of the forces which act on the sides of the wedge tends to drive it downwards. This resultant will, at any rate, tend to retard, and to a considerable degree, the reduction of the bowel. If, on the other hand, we have previously emptied the oedematous parts by pressure, either from within or from without, then we have the wedge's base directed upwards, and all the force applied at the rectum end tends to drive the invaginated bowel in the desired direction. As regards the other forces called into play, I think we need only consider that one which acts at the neck of the invagination in an upward direction, and half of whose power acting on the outer intestinal wall is at once lost; and that one which dilates the intestine. The former it is unnecessary to consider further; the latter, brought into play as it is on the same principle as is employed in a Bramah's press, may be enormous, and quite capable of rupturing the intestine if not kept carefully under proper control.

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