ACUTE INTUSSUSCEPTION IN ADULTS DURING A FAST.

BY

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ACUTE intussusception in the adult is rare. Of 187 cases, acute and chronic, analysed by the late H. L. Barnard, only 19 were in patients over 20 years of age, and those were mostly subacute or chronic. The few cases of intussusception that are met with in adults are as a rule of the chronic variety and commonly secondary to the presence of polypi, other submucous tumours, or foreign bodies.

The following two cases of acute intussusception in adults are specially interesting as they both occurred in the same week during the Mohammedan fasting season, when Mohammedans abstain from all food and drink of any description from the small hours of the morning until sunset. Both patients had been in perfect health without a sign or symptom of intestinal—or indeed any other—disorder before they developed the condition. They were both at the end of a fasting day when the symptoms of invagination occurred—in one case after drinking a glass of cold water, but in the other case before taking any food or drink.

CASE I.

A policeman, aged 40, drank a glass of water at sunset—that is, after a fast of nearly sixteen hours. He immediately developed severe colicky pains, followed in about two minutes by vomiting of a slightly yellowish fluid. He came to hospital four days later with a history of incessant vomiting and absolute constipation and all the signs and symptoms of acute intestinal obstruction and commencing peritonitis. Laparotomy revealed an ileo-colic intussusception. Reduction was impossible owing to oedema of the intussusceptum and commencing gangrene in parts of the intussusciptens. Resection and drainage of the bowel and peritoneum were performed, but the patient died twelve hours later.

CASE II.

The second patient, a peasant aged 50, had been fasting for about sixteen hours. Half an hour before sunset, while preparing his long-awaited-for meal, he was seized with violent colic, followed by vomiting of a small amount of yellowish stringy fluid and absolute constipation. He came to hospital five days later presenting a typical picture of acute intestinal obstruction and peritonitis. On laparotomy, pus and faeces were found in the peritoneal cavity as well as an intussusception of the variety known as iliaca-ileo-colica. It had started as an ileo-ileal intussusception about 4 inches from the ileo-caecal valve, the intussusceptum passing through the latter into the caecum. The intussusciptens was gangrenous in patches and there was a ring of gangrene round the intussusceptum where it was constricted by the proximal end of the intussusciptens; this had resulted in perforation. Resection was therefore resorted to, and the bowel and peritoneum were drained. The patient died six hours after operation.

In both cases examination of the intussusceptions removed, and of the rest of the intestines, *post mortem* showed nothing in the nature of a tumour of the intestinal wall or of a swelling of Peyer's patches to account for the invagination. The length of invaginated gut was 2 feet in the first and 3 feet in the second case.

It is probable that hunger could be considered as the exciting cause of the invagination in both, or at least in one, of these cases. In one of Leichtenstern's 442 cases the evidence of invagination came on shortly after drinking much cold water while sweating. Whatever part the drinking of cold water played in the causation of Case i, in the second case this factor did not exist.

The connexion between "hunger pains" and gastric peristalsis is well established, and so is the presence of a gastro-ileal and a gastro-colic reflex. Hurst, in summing up "mass peristalsis of the colon," mentions that the movement occurred in two of his patients when they felt faint with hunger and food was brought into the room. He considers such cases as "a remarkable example of the influence of the mind on the motor functions of the intestines." He also says that patients who suffer from diarrhoea after meals also have diarrhoea when they are faint with hunger as a result of the unusual postponement of the hour of a meal. It is therefore not very unlikely

that excessive hunger, together with the eager expectation of a good meal, as is the habit of the fasting Mohammedan, may excite the abnormal peristalsis which leads to intussusceptions in the ileo-caecal region.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

CARBON TETRACHLORIDE AND OIL OF CHENOPodium IN HELMINTHIASIS.

AN article under this heading appeared in the *BRITISH MEDICAL JOURNAL* of June 23rd, 1923 (p. 1048), and I write to express my agreement with the opinion of its author, Dr. J. G. Reed of Borneo, that carbon tetrachloride is even more effective as an anthelmintic when combined with oil of chenopodium. The following procedure has given good results in the Georgetown Public Hospital, British Guiana. The faeces are examined for ova of *Ankylostoma duodenale* and other parasites before treatment, and also three days after it. Three ounces of saturated solution of sodium sulphate are given in the evening, and next morning a dose of carbon tetrachloride, from 40 minims to 1 drachm, according to the age and strength of the patient, is administered. On the third night after this another dose of 3 ounces of the sodium sulphate solution is given. About 60 per cent. of the patients so treated experienced nausea and headache. Of 135 patients, 104 were positive as regards *Ankylostoma duodenale* ova; a few of them were positive also for *Strongyloides intestinalis*, *Ascaris lumbricoides*, or *Trichuris trichiura*. The majority of those faeces which did not contain ankylostoma ova contained those of one or other of the parasites mentioned. About 40 per cent. were found to have become negative after a single dose of carbon tetrachloride. Some patients require several doses, and these heavily infected cases are very weak, anaemic, and oedematous. East Indians form the majority of patients requiring treatment: their faeces invariably contain ankylostoma ova, and a characteristic symptom of the condition is a purplish tongue. The following are details of three heavily infected cases:

CASE I.—An anaemic black man, aged 56, admitted with pyrexia and delirium, was found to have an enlarged liver, and the faeces contained large numbers of ankylostoma ova and embryos of strongyloides. The blood count was as follows: total red cells 760,000 per c.mm., normoblasts, megalocytes, and microcytes present, but no malarial parasites; haemoglobin 10 per cent., colour index 0.6; total white cells 10,000 per c.mm.; differential count—polymorphonuclears 70 per cent., large lymphocytes 25.5 per cent., large mononuclears 4.5 per cent. After two months' treatment with carbon tetrachloride, amounting in all to 6 drachms, and with iron and quinine, ankylostoma ova were still present, but the anaemia was much less. The blood count was now: total red cells 4,200,000 per c.mm., haemoglobin 50 per cent., colour index 0.6; total white cells 3,200 per c.mm.; differential count—polymorphonuclears 53.5 per cent., large lymphocytes 29 per cent., large mononuclears 3.5 per cent., eosinophils 14 per cent. After further administration of 40 minims of carbon tetrachloride, combined with 15 minims of oil of chenopodium, ankylostoma ova were absent from the stools.

CASE II.—A black man, aged 34, with ankylostoma ova and strongyloides embryos in the faeces. Six weeks' treatment with carbon tetrachloride (4 drachms in all), iron, and quinine, resulted in an increase of the red blood corpuscles from 1,736,000 to 2,110,000 per c.mm.

CASE III.—A Portuguese, aged 32, whose faeces contained large numbers of ankylostoma ova, and whose blood count was 1,952,000 red cells and 34,800 white cells per c.mm., only required one week's treatment in hospital.

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