

AN UNUSUAL DUODENAL HERNIA.

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(PLATE XXIII.)

SOME weeks ago, while making a post-mortem in the General Hospital, Colombo, Ceylon, on a Tamil female, æt. 60 years, who had died from chronic interstitial nephritis and enteritis, I came accidentally upon such an unusual form of duodenal hernia, that I considered an account of it might not be altogether devoid of interest.

GENERAL DESCRIPTION.—Upon opening the abdomen, the stomach, which was empty, was at once noticed to be in a condition of gastropotosis. Above the stomach, and clearly seen through the thin lesser omentum, were two pieces of small intestines lying side by side (Plate XXIII. Fig. 1).

The foramen of Winslow was at once examined, but the intestines did not pass through it, and the foramen was absolutely normal. On introducing the fingers through this foramen, the bowels could be felt lying free in the cavity of the lesser sac. The great omentum and the transverse colon were now drawn upwards, and a large oval aperture, 2 in. \times $2\frac{1}{4}$ in., was seen in the transverse meso-colon (Plate XXIII. Fig. 2). Through this aperture the bowel passed from the cavity of the greater sac of the peritoneum to that of the lesser.

When the fingers of one hand were inserted through the foramen of Winslow, and the fingers of the other through the hernial aperture in the transverse meso-colon, they met without the intervention of any layer of peritoneum.

The great omentum and transverse colon were then replaced in position, and the lesser omentum was carefully cut through, but no sac was found round the bowels, though carefully looked for. The bowels were, therefore, lying free in the cavity of the lesser sac. They were then stitched in position, and the whole mass of stomach, lesser sac, transverse colon, pancreas, duodenum, jejunum, etc., was cut out, and the figures already referred to were made.

The arrangement of parts was now more carefully examined.

VASCULAR RELATIONS.—The hernial opening has to its right the middle colic artery (Fig. 2), and to its left a small branch of the left colic to some fat lying in the transverse meso-colon. The large branch of the left colic artery is situate some little distance to the left. The inferior mesenteric vein has no immediate relationship to the aperture, its transverse portion being half an inch posterior to the aperture, and its ascending portion in no direct relationship at all.

The *hernial aperture* (Fig. 2), 2 in. \times $2\frac{1}{4}$ in., is situate in the transverse meso-colon; when stretched it is oval in shape, and leads directly into the

lesser sac. It is bounded on the left by the plica meso-colica transversa, and by the transverse meso-colon; anteriorly by the transverse meso-colon; on the right by the transverse meso-colon, the meso-colic artery being very near to the right margin below; behind, by the peritoneum over the pancreas.

Plica meso-colica transversa.—This fold of peritoneum is bloodless, and runs from the transverse colon to the duodeno-jejunal junction, and the mesentery of the jejunum (Fig. 2). The *stomach* was in a condition of gastropnoxis (Fig. 1).

The first part of the *duodenum* (Fig. 1) is 3 in. in length, and ascends vertically from the pylorus to the gall bladder, where it turns sharply posteriorly, and ends in the second part, which is normal in every respect, as are the third and fourth parts. The duodeno-jejunal junction was normal in position.

The *jejunum* proceeded from the duodeno-jejunal junction, upwards through the hernial aperture in the transverse meso-colon (Fig. 2) into the cavity of the lesser sac, in which it made two coils, the long axes of which were vertical; it then passed out of the hernial aperture, and in the rest of its extent was normal. The length of the jejunum contained in the lesser sac was 12 in.

The bowel was in no way nipped by the hernial aperture, which was big enough to allow of the passage of a larger mass of bowel than that which at the autopsy actually was found passing through it. The meso-jejunum, of course, followed the jejunum.

The rest of the intestines were normal in every respect.

The *pancreas* was normal.

The reflections of the *peritoneum* appeared quite normal. There was no sign of peritonitis.

With regard to duodenal pouches, two were seen—inferior and infra-duodenal fossæ (Fig. 2).

ANTE-MORTEM SYMPTOMS.—The hernia was accidentally discovered, the patient having died from enteritis and chronic nephritis. As she only came into the hospital just before death, and as no friends were available, no history of her previous illnesses could be obtained.

REMARKS.—How did such a condition as that described above come about. A rent such as that found in the transverse meso-colon can only, it seems to me, be accounted for by—(1) traumatism; (2) congenital defect; (3) a hernia into a duodenal fossa.

1. *Traumatism* is excluded, by the fact that a traumatic tear of the transverse meso-colon must be associated with severe injuries of other abdominal organs, and no traces of such injuries were to be found; nor is there any peritonitis.

2. No theory of *congenital defect* will explain this aperture, as the usually accepted development of the transverse meso-colon is by fusion of the original transverse meso-colon with the mesogastrium. It is not likely, in my opinion, that any gap could form as a congenital defect in this position, as it would mean defect in, or absorption of, four layers of peritoneum.

3. *A hernia into a duodenal fossa.*—The described duodenal fossæ are, according to Moynihan, nine in number, namely—(1) the superior duodenal fossa; (2) the inferior duodenal fossa; (3) the posterior duodenal fossa; (4) the duodeno-jejunal fossa; (5) the inter-meso-colic fossa; (6) the infra-duodenal fossa; (7) the para-duodenal fossa; (8) the mesenterico-parietal fossa; (9) the para-jejunal fossa.

The usually described duodenal herniæ are of two kinds—left and right duodenal herniæ.

Moynihan,¹ from his careful study of the literature and of specimens, is of the opinion that, judging by the position of the inferior mesenteric vein in the neck of the hernial sac, the opinions of Jonnesco that the duodeno-jejunal fossa, and of Treitz that the inferior duodenal fossa, are the fossæ into which the herniæ enter, are wrong, and that the only fossa which shows such a relationship of the inferior mesenteric vein is the para-duodenal fossa, which has a boundary fold called the *plica venosa* containing the vein.

A right duodenal hernia takes place, according to the same authority, in the mesenterico-parietal fossa.

The hernia I have described is neither a left duodenal hernia nor a right duodenal hernia, it is by position a superior duodenal hernia.

The only method of investigation which seems to be trustworthy is, first, to follow the example set by Moynihan, and to carefully examine the vascular relationship of the mouth of the hernia. The mouth of the hernial aperture is situate immediately to the left of the meso-colic artery (Fig. 2), and has no relationship with the inferior mesenteric vein. Secondly, to inquire whether any characteristic fold of peritoneum can be seen near that mouth. There is an extremely characteristic fold to be seen in Fig. 2, namely, that labelled *plica meso-colica transversa*, which has already been described.

Of the above-mentioned duodenal fossæ, two (namely, the inferior and the infra-duodenal fossæ) are present in the specimen, and of the remainder there is only one (namely, the inter-meso-colic fossa, called *recessus inter-mesocolicus transversus*, Brösike) which has anything like similar relations. This fossa has its aperture directly to the left of the meso-colic artery, and its anterior wall formed by a fold of peritoneum, which runs from the under surface of the transverse meso-colon to the duodeno-jejunal junction and the meso-jejunum, and which was called by Brösike the "*plica meso colica transversa*," and which, as I have described above, is the fold to be seen in this specimen.

Taking the vascular relations and this fold into consideration, I am of the opinion that the mouth of the *recessus inter-mesocolicus transversus* of Brösike corresponds exactly to the present hernial aperture.

Unfortunately, I have no means of referring to Brösike's original paper, but, according to Moynihan, Brösike considered it as a modification of the fossa duodeno-jejunalis, and says that it is rare, Brösike describing it six times, three times on the right side and three times on the left side, and Moynihan once.

Since finding this hernia, I have had the good fortune to come across a typical fossa inter-mesocolica on the left side in a Singhalese body. I ruptured the meso-colon forming the posterior wall of the

¹ "Retroperitoneal Hernia," 1899.

fossa, and extended the tear forwards, and produced exactly the same appearance as regards the aperture; the plica and the vascular relations are as described in this specimen. In discussing left duodenal hernia, Moynihan remarks, with regard to the recessus inter-mesocolicus transversus, that it is never likely to develop any hernial contents; but, he continues, supposing such a hernia to occur, there would be an entirely different arrangement of vessels in the neck and the anterior wall, from any that he has met with.

This entirely different arrangement is depicted in Fig. 2.

CONCLUSION.—I am of opinion that, in some unknown way, a hernia took place into the recessus inter-mesocolicus transversus, and that this hernia ruptured the posterior wall of the fossa and burst into the lesser sac, thus producing the aperture in the transverse meso-colon, and the hernia of a certain length of the jejunum into the lesser sac. I am further of the opinion that this must have taken place probably years before the death from renal disease and enteritis.

I believe that no such hernia has hitherto been described, but, should this have been the case, I beg to offer as my excuse for not referring to it, the fact that in Ceylon it is not possible to obtain full literature on a medical subject.

DESCRIPTION OF PLATE XXIII.

FIG. 1.—Anterior view of the hernia.

FIG. 2.—Posterior view of the hernia.

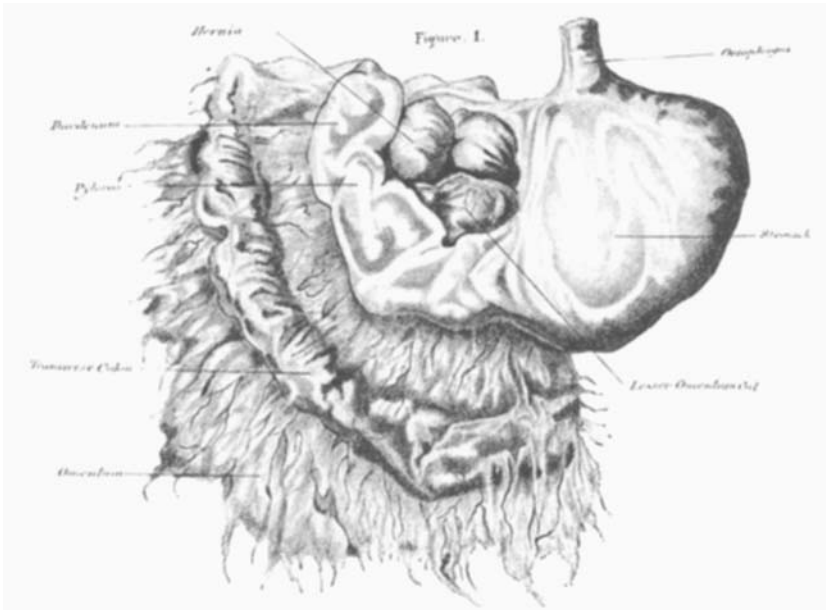


FIG. 1.

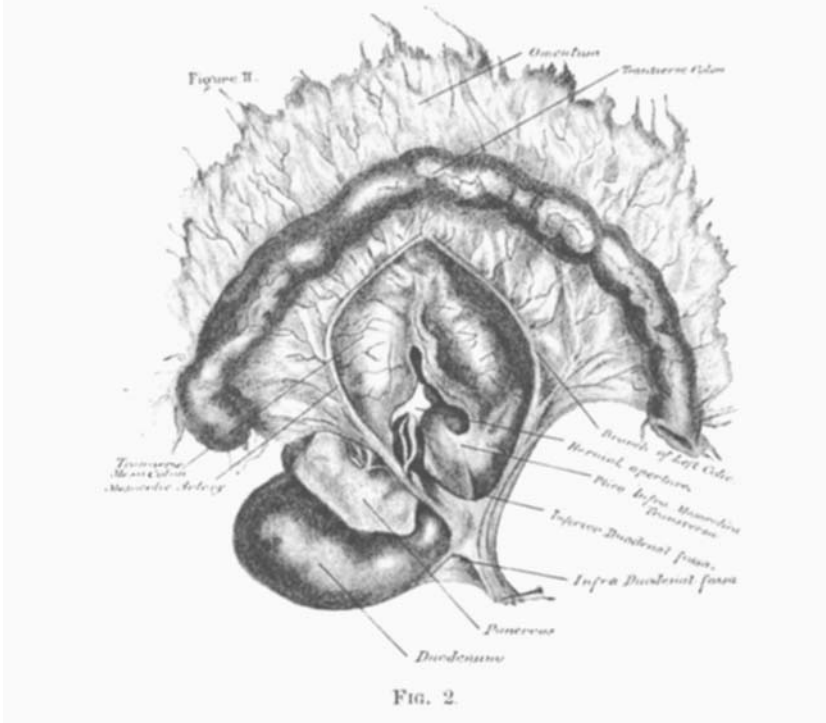


FIG. 2.