In a case of any size a gauze drain for twenty-four hours is always used, and in all cases I am more inclined to use it than a few years back, when the prevailing fashion was to sew up every wound firmly. For sutures I prefer interrupted stitches of the finest gossamer silk-worm gut, which are removed on the fourth day. So long as there has been no tension in the wound, healing is usually effected without a row of stitch marks, provided that a very fine needle is used. In all extensive cases I make a rule of keeping the patient in bed at least fourteen days from the operation, and where circumstances permit it is advantageous to keep them lying down, to a great extent in the open air, for a full month, and by that time the wound is soundly healed throughout.

As to the disappearance of enlarged tuberculous glands without operative treatment, it must be admitted that such cases are extremely rare after the glands have existed as definite palpable swellings for more than six months. When such a happy result is achieved its main contributory causes are always the climatic and hygienic conditions, and to these must be added the time that can be given up to prolonged rest or at least a cessation of business worries or harassing pursuits. It cannot be too strongly impressed on parents and patients that a few weeks at the seaside, especially if spent at a crowded boarding house, is absolutely futile in these cases; the object to be attained is to endow the tissues of the body with sufficient force not only to enable its cells to destroy the invading organisms but to develop sufficient resistance to a possible second invasion when the conditions of environment are less favourable. For this months or even years are necessary, and in the case of young children they should be left at a seaside place for two years at least; if this cannot be done, and at the end of the time that has been allowed a sensible diminution in the size of the glands has not taken place, their removal by operation should be carried out without hesitation. Young adults have been benefited by varying the seaside atmosphere with a stay for some months in a Swiss mountain resort, but very great care is necessary in selecting the cases likely to be improved. The train journey is fatiguing, the food is different to that he has been accustomed to, and if proper supervision is not provided the patient is apt to indulge too freely in the vigorous athletic pursuits that are common in such centres, and, as a result of overstrain, some of the glands break down, and the return journey is undertaken under distressing conditions. A long sea voyage is sometimes recommended, but is always a risky experiment, and the rapid changes of climate from our own wintry weather to the humid moisture of the tropics is often unsettling to an invalid.

In the following four sets of cases operation should be carried out at once:

(1) Where suppuration is taking place; (2) where sinuses, as a result of burst abscesses or previous incomplete operations, are present; (3) where, though not obviously suppurating, the glands are increasing in size, are causing pain, uneasiness, and deformity, and have not yielded to climatic and hygienic measures; (4) where gland infection has occurred in subjects unable or unwilling to incur a prolonged period of rest, or whose future would be jeopardized by the interruption of their education, or by the presence of the glands, as in boys wishing to enter the public services.

In giving the reasons for an operation to the patient, or his parents or friends, too much stress is still laid on the possibility of an early infection of the lungs with tubercle as a direct result of the glandular trouble. I have certainly seen the glands infected in a case of acute pulmonary tuberculosis, no doubt through the blood stream, and can cite two or three large unoperated gland cases that have eventually developed pulmonary tubercle, but in my own experience general tuberculous infection from primary glandular enlargements is exceedingly rare. The possibilities of discharging sinuses, scarring and contracting of the skin, chronic invalidism, and general damage to the organism, are sufficiently cogent reasons to urge, when requisite, the performance of an operation that is attended by few dangers, accompanied by small disfigurement, and, where completely carried out, followed by no recurrences.

REFERENCE.

¹ *Lancet*, vol. II, 1903.

CONGENITAL HYPERTROPHY AND DILATATION OF THE SIGMOID FLEXURE.*

By W. F. BROOK, F.R.C.S.,

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SO-CALLED idiopathic dilatation and hypertrophy of colon (or Hirschsprung's disease, as it is called by the Germans) is of such rare occurrence—or probably, to be more correct, though not infrequent, is so seldom recognized during life—that it may not be out of place in giving an account of the case I am bringing before you briefly to refer to the symptoms and pathology of the disease.

It occurs most frequently in early childhood; in the majority of the reported cases the symptoms having commenced within a few days of birth. These are—constipation with abdominal distension, sometimes reaching enormous proportions, and more or less frequently recurring attacks of intestinal obstruction, the general health being often seriously affected by intestinal auto-intoxication. In well-marked cases which have attained a few years of life there is, in addition to a permanently-enlarged and lengthened abdomen, marked deformity of the thorax, which is shortened and widened so that the lower ribs lie horizontally and the sub-costal angle is widely opened out. The deformity is well illustrated in a paper by Walker and Griffiths,¹ describing a case in a boy aged 11, in whom the measurements from the base of the ensiform to the suprasternal notch and pubes were respectively 4½ and 23 in.; and in another by Crozier Griffiths² on congenital idiopathic dilatation of the colon.

The disease is more frequently found in males than in females, the proportions varying in different collections of cases by different writers—for example, Hale White³ refers to 12 cases, of which 11 were males; Crozier Griffiths⁴ collected 24 cases, of which 20 were males; and Duval, quoted by Kredel,⁵ collected 45 cases, of which 36 were males. Death generally takes place in early life from various causes—for example, obstruction, colitis, syncope or perforation, and probably volvulus—but a certain number reach adult life. Necropsy or laparotomy shows that the distension is entirely due to enormous dilatation with elongation of the colon or some part of it, especially the sigmoid. The muscular coats—sometimes all the coats—are greatly hypertrophied. The rectum, though sometimes taking part in the dilatation, is generally normal, and no organic obstruction is found to account for the condition. When occurring in middle or advanced life the symptoms and pathology are the same, and although a history pointing to congenital origin is more often wanting than not, the enormous hypertrophy and dilatation of the bowel, the usual absence of faecal accumulation, and the fact that the patient is generally a man, suffice, as a rule, to differentiate the condition from dilatation due to habitual overloading of the sigmoid with faeces.

The case I now report is particularly interesting, first, because it is one of those few in which there is an undoubted congenital history, and at the same time the subject has reached adult life, is well developed, and now enjoys complete health; and, secondly, on account of the coexistence of the faecal concretion which led to the error in diagnosis.

The patient, a plump and well-developed, though stupid, young woman of 21, was admitted to the Swansea Hospital on July 21st, 1904, for abdominal tumour. The following history is copied from the house-surgeon's notes:

In February, 1903, she first noticed a hard lump in the lower part of the abdomen to the left side. It caused no trouble, but five weeks ago she noticed that it had increased in size. The only abdominal pain she has had has been consequent upon aperients or enemas for constipation, from which she has always suffered. Apart from this she has always enjoyed good health until five or six weeks ago, since which she has felt below par. Menstruation regular.

There was a hard globular and movable tumour, dull on percussion, rising out of the pelvis somewhat to the left of the middle line. On vaginal examination it was most obvious in the left posterior quarter of the pelvis, and was movable apart from the uterus, which it had pushed forward and to the right. The diagnosis was solid ovarian tumour of the left side.

On August 3rd the abdomen was opened and there presented in the wound a thick-walled collapsed viscus which was at first mistaken for an enormously dilated stomach. It extended from immediately behind the pubes upwards into the upper umbilical and well into the right iliac and lumbar regions,

* Read before a meeting of the South Wales and Monmouthshire Branch of the British Medical Association at Newport, March 9th.

REQUESTS TO MEDICAL CHARITIES.—The late Mr. Blackall Simonds of Bradfield, Berks, left £100 each to the Royal Berkshire Hospital and the Reading Branch of the Queen Victoria Society for Nursing Poor People at Home.

completely covering the small intestines. Upon being withdrawn from the abdomen it was at once identified as colon by its bands, which were from $1\frac{1}{2}$ in. to 2 in. in width. The tumour, which was about the size of a croquet ball, was found to be rolling about freely within it, and was easily made to occupy the prolapsed gut. Considerable pressure through the hypertrophied bowel wall was required to indent it.

Further investigation showed that the hypertrophied bowel was an enormously dilated and elongated sigmoid loop. The upper part merged into the descending colon, which was dilated, but to a lesser extent than the sigmoid, while the rectum appeared to be normal in position and size and without any constriction at its point of junction with the lower limb. There was a well-marked meso-sigmoid of a maximum length of from 5 in. to 6 in., while the greatest width of the bowel, which was at the fundus of the loop, was about 7 in. At this point it gave the impression of being capable with very little stretching of being drawn over an average man's thigh. The bowel wall was three or four times its normal thickness, all the coats taking part in the hypertrophy. An incision 4 in. long was made in its free border at the fundus of the loop on to the concretion, clamps having been previously applied above and below. The concretion presented a smooth surface covered with mucus. By means of a wide osteotome pushed into it and rotated it was easily and cleanly broken into three fragments, which were removed separately with a lithotomy forceps. It weighed 200z., and was entirely composed of vegetable fibre closely matted together. The bowel wound was closed and infolded by three continuous stout catgut sutures each including a greater length than the previous, so that 10 or 11 in. of the loop were narrowed down by an extent varying from $3\frac{1}{2}$ in. in the centre to 1 in. at either end. The abdomen was closed without drainage, and the patient made an uneventful recovery.

I saw her again a few days ago and learnt that with the help of abdominal massage and an occasional aperient, not more often than once a week, she had been free from constipation and had a daily action of the bowels since leaving hospital.

Interrogated more closely after the operation, she admitted that she had suffered from constipation as long as she could remember, and latterly never had an action without the assistance of an aperient. From her mother the following history was subsequently obtained. For a week after birth there was no action of the bowel, and after this to get an action a small piece of soap was daily pushed into the rectum. At 6 months the belly was much distended at frequent intervals and as the result of medical advice, treatment by hot baths followed inunction of cod-liver and castor oil over the abdominal wall was adopted and maintained till the age of 4. By this means an action was secured on an average every other day. Later, when attending school, constipation with distension became more and more marked until a fortnight or even three weeks often elapsed between two evacuations.

At this time she was frequently under medical treatment, and on one occasion a loaded rectum was digitally cleared out by her medical attendant. Frequent recourse was had to soap and water enemas and eventually the bowels were never opened without their aid or that of an aperient. At 14 attacks of distension were accompanied by abdominal pain and vomiting and recurred from time to time until her admission to hospital. The history is intentionally given in the sequence in which it was obtained.

There is nothing in the appearance of the abdominal wall (nor was there before the operation) to suggest that there had been frequent and excessive distension, but subsequent examination shows that the belly wall when the patient is lying on the back is abnormally elastic and redundant, allowing of large folds consisting of its whole thickness being picked up in the grasp of the hand without inconvenience to her. The chest is well formed, and there is no spreading of the subcostal angle.

In Allbutt's *System of Medicine* Hale White,⁶ discussing 12 cases of idiopathic dilatation of colon (the only examples of the condition discoverable in the medical literature of the previous forty years) finds that five were in boys, four in men of 50 and upwards, one in a girl of 17, but in whom symptoms had appeared at the age of 8 months, and the remaining two in men of 24 and 34. He concludes that probably two varieties of the condition should be distinguished: (1) That met with in children, and "due to some congenital inertness of bowel"; and (2) that occurring in elderly subjects, which he suggests is comparable with dilatation of the stomach without pyloric

obstruction. Since this was written many more cases have been reported and collected, and various explanations offered of their pathology. Thus Treves,⁷ arguing chiefly from his own very remarkable case, that of a girl aged $5\frac{1}{2}$ years, in whom, after trying other measures without relief, he finally excised the descending colon, sigmoid, and rectum, but also from the fact that such great hypertrophy of the coats is invariably found in these cases, contends that in children idiopathic dilatation of the colon is due to a congenital narrowing in the lower part, while the cases occurring in advanced life, he suggests, are due to a habitually overloaded sigmoid loop hanging down into the pelvis and causing obstructive kinking at its distal extremity, the hypertrophy being the result of effort to overcome the obstruction. But, as has been pointed out by other writers, if overloading of the sigmoid were the prime cause in cases arising late in life, women should be more subject to the condition than men (constipation with them being much commoner), whereas, as Treves himself observes, the reverse is actually the case.

Then with regard to Treves's explanation of the congenital origin in children, Crozier Griffiths⁸ points out that the view is not supported by the evidence of numerous necropsies, special mention being made in the vast majority of recorded cases that no such narrowing in the rectum or lower colon existed.

Again, Griffiths holds that the congenital cases should be divided into two classes (1) those in which dilatation actually exists at birth, and (2) those in which there is only a congenital tendency to dilatation, a position which as regards the latter class rather seems to beg the question.

In a recent paper upon the subject, Kredel⁹ contends that the condition is not so rare as is generally supposed, and attributes all cases, whether occurring in children or in later life, to congenital variations in the length of certain parts of the colon and meso-colon. That these variations do exist at birth and earlier is a matter of common anatomical knowledge. According to Ballantyne,¹⁰ the transverse colon in a full-term fetus "not infrequently forms a wide loop, passing downwards towards the pelvic brim," and "the sigmoid flexure is relatively of great length and generally forms a large loop, part of which, in the male fetus at any rate, lies in the posterior part of the pelvic cavity." A slight exaggeration in the length of these folds, caused probably by some developmental error, or by a more or less slight and transitory obstruction, associated perhaps with peritonitis, constitutes the first step in the direction of the deformity. Such a loop would favour stagnation, present a difficulty in the onward passage of the bowel contents, and lead to dilatation and compensating hypertrophy—the more pronounced, other things being equal, in proportion as the effect is felt earlier in fetal life at a time when intestinal development is more active.

This theory of the origin seems applicable to all cases, in spite of the difficulty which Kredel finds in interpreting those in which adults are affected and the history cannot be traced back into childhood. This would probably have been the case with the patient who is the subject of this communication but for the accidental existence of the faecal concretion. But for this, the later and more severe symptoms would probably have been postponed till later in life, or might even not have occurred at all, while, had not the mother's history been available, nothing would have been learned of the troubles in her early life.

So far, the only undoubted cases which have been published have been those in which the symptoms have forced attention and in which the pathological condition has been very marked, as shown by laparotomy or necropsy; but it seems only reasonable to assume that lesser degrees of the deformity exist, giving rise to symptoms correspondingly less severe, and consequently easily misinterpreted. Indeed, so long as hypertrophy keeps pace with dilatation, there would appear to be no reason why symptoms should not be indefinitely postponed.

As regards treatment, massage is recommended by Crozier Griffiths but condemned by Kredel as being likely to increase the risk of perforation.

For a time it appears to have sufficed in this case, for inunction of oil into the abdominal wall amounted to massage. Aperients and enemas, so far as possible, should be avoided, as they only tend to increase the dilatation. Colotomy was done in several cases, notably in one of Osler's, with relief of symptoms, but should only be regarded as a temporary measure. Narrowing of the dilated loop, as was done in this case, so far with success, is recommended by Kredel, but many of the more severe cases will probably resist all treat-

ment short of resection of the useless and dilated loop, as was so brilliantly carried out by Treves.

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THE AFTER-HISTORY OF PATIENTS UPON WHOM GASTRIC OPERATIONS HAVE BEEN PERFORMED.

[SECOND SERIES.]

By C. MANSELL MOULLIN, M.D., F.R.C.S.,

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IN the BRITISH MEDICAL JOURNAL of February 20th, 1904, I published an account of the subsequent history of eighteen patients upon whom I had operated for various affections connected with the stomach prior to the end of 1902, and whose cases I had been able to trace. The object that I had in view was to collect and record, not the immediate results of these operations, which are sufficiently well known already, but those that follow later, after the patients have returned to work and to their ordinary diet and mode of life; to find out whether the relief they obtained was permanent, or whether the improvement that followed the operation may not have been merely of a temporary character, due, perhaps, quite as much to the rest in bed, and quiet, and good feeding as to the operation itself. I propose now to continue the series with the cases operated upon in 1903, as the time that has elapsed, though not so long as in most of the previous ones, is long enough to show whether the benefit obtained is likely to last or not. The question is one of great importance, especially in connexion with gastro-enterostomy, which is regarded by many as more or less upon its trial. It is acknowledged that very great relief is obtained in many cases; but on the other hand, it is asserted that in many the old symptoms persist; that in some new lesions are caused in the shape of peptic ulcers in the bowel below; and that there is no certainty that the artificial opening will not contract. (In connexion with this I may mention that I have recently seen a specimen taken *post mortem* from a patient upon whom gastro-enterostomy had been performed twelve years before, and who had died from some trouble in no way connected with the stomach, in which the artificial communication was as perfect as could be wished and apparently had performed efficiently all the duties required of it.) As might be expected in an inquiry of this kind, a considerable number of the patients cannot be traced. Still, out of twenty-nine operated upon in 1903 (excluding all cases of carcinoma and those in which perforation had taken place already), I have been able to obtain a record of twenty-four.

The questions asked were the same in all. Have you any pain after meals? If so, is it severe? Are you often sick? Have you brought up any blood since the operation? Is your general health better than it was?

In forming an estimate of the value of gastro-enterostomy and pyloroplasty in cases of unperforated gastric ulcer, one point that is not usually taken into consideration is the question how much is it reasonable to expect of them? This depends partly upon the extent of the changes that have already been allowed to take place in the stomach, partly upon the opportunity the patient may have in the future for avoiding the causes that led to those changes. If the ulceration has been allowed to continue for many years without any effective treatment, so that instead of there being merely a single limited lesion the stomach is reduced to the condition of an irregular misshapen sac, distorted by cicatrices and hampered in every direction by adhesions, it is not reasonable to expect that the formation of an artificial opening into the bowel could restore everything to its normal state, nor is it reasonable to expect that patients who have suffered from severe dyspepsia for years before the formation of the ulcer will henceforth be freed from all pain and inconvenience, unless at the same time they avoid the causes that led to their dyspepsia.

It sounds a trite thing to say, but apparently it is often forgotten, that if the conditions of living after the operation remain the same as they were before, the consequences will

be the same, except in so far as the stomach is able to empty itself more rapidly and more thoroughly into the bowel. All that surgery can do is to enable the stomach to pass its contents on rapidly and without effort; to drain it thoroughly and give it rest; and to prevent its dragging violently and painfully upon the intensely sensitive parietal peritoneum around it. Neither gastro-enterostomy nor pyloroplasty claims to be a panacea, or an operation that can undo the mischief caused by years of inefficient treatment, especially when the conditions that gave rise to that mischief are allowed to continue at work unchecked. They must be judged by the results they give in cases which are operated upon before they have reached the hopeless stage so freely illustrated in our museums.

Taking these 24 cases in conjunction with those which I have already published, it appears to me that there is sufficient evidence to form at least a provisional opinion as to the permanent relief afforded by this operation.

Pyloroplasty (of which the first three in this series are examples) can only be regarded as a very qualified success. The pain returned more or less in all the cases. The scar left seems to have contracted again. It is a great pity, for the operation is a most ingenious one, is easy of performance, and takes but a very short time; but in my own mind there is no doubt that it should be reserved for cases in which the condition of the patient will not allow anything more to be attempted, and perhaps for those in which the chief feature is hypertrophy of the pyloric muscle. Free division of this muscular band, causing complete cessation of contraction for a time, may possibly lead to a sufficient degree of wasting to prevent any recurrence of the stenosis.

With regard to the twenty-one cases of gastro-enterostomy, twelve may be regarded as cured and five as very much benefited by the operation. But the true result is better than this, for, of the latter, several are as well as they could ever expect to be under the conditions of the life they lead. No. 16, for example, so long as she lives in the country, has only light work to do, and is reasonably careful as to diet, is perfectly well. But, unfortunately, this is not always possible, and the result is a relapse. So it is with others. The attacks of pain from which they occasionally suffer are brought on by some definite cause, of which by far the most common is indiscretion in diet. They cannot grasp the fact that the causes which led to the formation of the ulcer before the operation will, if they are allowed to continue at work, lead to trouble again, in spite of the operation. Gastro-enterostomy cannot confer upon the stomach greater digestive power than it possessed before the patient was ill at all. Two patients in whom no definite lesion was found—no ulcer and no scar—have not benefited in the least. What may have been the cause of their symptoms I cannot tell. Apparently it was not gastric ulcer, and the diagnosis, not the operation, is to blame. The remaining two are very perplexing. One, the last on the list, a martyr to some form of progressive osteo-arthritis, is gradually growing weaker and weaker for no known cause. Vomiting before the operation was incessant. The pylorus would hardly admit a probe. For a time there was considerable improvement. Then the patient gradually began to fail, growing weaker and weaker, with attacks of occasional vomiting and pain, but not sufficiently frequent or severe to account for the failure. The other was an exceedingly complicated case, in which laparotomy had already been performed, and in which there was good reason for thinking that the disease was not confined to the stomach.

The posterior transmesocolic operation was performed whenever practicable, but so far as the stomach is concerned, it seems to be immaterial whether the opening is made upon the anterior or the posterior wall. In either case it soon becomes the most dependent part. In addition to the gastro-enterostomy, in all but two a lateral communication was made as well between the contiguous sides of the jejunal loop. I have adopted this plan for the last four years, and I have never had the slightest trace of what is known as the "vicious circle." Indeed, it is impossible to understand how such a condition of things could be produced. The additional operation takes a very short time, and it is a great safeguard against the possibility of the rest of the small intestine ascending through the opening in the transverse mesocolon and lodging itself in the lesser peritoneal cavity, a complication which has been stated to occur occasionally after this method of operation. In several instances in which the patients were suffering from chronic starvation, I have made use of the opening in the jejunum to introduce a pint