almost any congenital deformity. In this connexion, Hertwig's¹² work is of great interest, for he succeeded, by applying chemical solutions to the ova of fish and amphibians, in producing many deformities, including spina bifida. A purely chemical and metabolic factor may therefore be at work.

There seems little need now for the consideration of the discountenanced amniotic band theory as a cause of any such deformity.

Conclusions.

1. The cause of exomphalos is most likely a defect in the development or function of the mesoblastic layer of the abdominal wall.

2. Treatment, to be successful, must be immediate and consists of open operation.

To my chief, Mr. Alex. MacLennan, I am indebted, not only for permission to publish these cases, but for much valued help and suggestion.

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THE CURE OF HAEMORRHOIDS WITHOUT OPERATION.

BY

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I AM somewhat diffident about placing my views on this subject before the readers of the *BRITISH MEDICAL JOURNAL*; but it is a journal which is read chiefly by general practitioners, and it may be helpful for general practitioners sometimes to read what one of their number thinks, even though it be heresy he preaches.

My text is that operation for haemorrhoids is not always successful, is usually unnecessary, and is rarely justifiable.

I have drawn no distinction between internal and external haemorrhoids, because I think most practitioners will agree with me that such a distinction is purely artificial. Varices exist inside the anus; some are forced down in defaecation, and fail to get back before the mucous membrane covering them is gripped by the sphincter. In the first instance they are internal; after coming down they are external. If they can be returned with the aid of providence and a little coaxing, they become internal again until next time. Finally, they come down for good, and cannot be returned.

Up to a point the presence of piles outside the anus may be taken as an indication of the presence of more piles inside ready to come down. An author recently stated the limit in number of potential piles to be eight, that being the number of venous loops inside the anus. It is certainly a fairly large number, and in practice I suppose none of us have found the whole eight possible piles outside, with consequently no more piles, or possibility of piles, inside.

The critical period is when a pile is changing, or has recently changed, from inside to outside the anus. So long as it is inside and remains always inside (even during defaecation), it does little harm. When it prolapses during defaecation, and when it first comes out for good, it causes all the pain, haemorrhage, and irritation, and is liable to thrombosis and suppuration. Later, after a varying but usually considerable period, it becomes covered with squamous epithelium, and therefore insensitive, and small, and is no more than an inoffensive tag of skin, which, with reasonable cleanliness, need cause no trouble. All this may be rather crude pathology, but it is clinically, I think, a fair summary of the sequence of events.

Operation is not always successful. The usual operation removes the piles which are outside, and perhaps the more prominent of those inside. In regard to this—analogously with those of the leg—it must be remembered how remark-

ably varices may disappear under the conditions of anaesthesia and an alteration in the position of the body. Note, too, what a difference there is between the conditions of straining and prolapse of defaecation and those of the lithotomy position.

The operator at the same time puts the sphincter out of action for the time being, and gives the patient very good advice as to diet, exercise, and aperients. To my mind, if the piles do not "recur"—or, to be more accurate, if more piles do not come down—it is likely to be as much due to the advice of the operator, impressed on the patient's mind by the expense, trouble, and pain of the operation, as to anything done at the operation. The author to whom I have referred admits this, but suggests a very much more radical operation, amounting almost to a resection of the mucous membrane lining the whole canal of the anus and lower rectum. I cannot speak to the results of this, but it is not the operation for piles usually undertaken, and I have seen certainly one case of most troublesome stricture resulting from a much less sweeping operation than this.

The usual operation for piles is not a dangerous one; but it is an operation, and as such, from the point of view of the patient and the conscientious practitioner, to be avoided if possible; it is painful and it is not certain to cure.

Now for the alternative: The usual palliatives—ung. hamamelidis, ung. gallae cum opio, etc.—are no more than palliative. They to some extent relieve pain, but do little to stop the bleeding and nasty mucous discharge. I consider them only fit for use during an attack of thrombosis—after the worst has been got over with fomentations—and also if it is essential that a patient should go about his work after a recent defaecation.

But there is a means of curing piles, in the sense that they can be made entirely innocuous. It is a question of reducing from a year or two to a month or two the period necessary to change a turgid mucus-covered and tender varix into a skin-covered excrescence and preventing the piles still inside the anus from coming out.

I have seen the application of calomel powder recommended and have tried it. It is useful, but calamine powder is much more so. Calomel is a trifle irritating, but calamine is soothing and is astringent as well. But the mere instruction to apply calamine will do little good.

Suppose a bad case, with a ring of prolapsed piles surrounding the anus, some perhaps denuded of epithelium, intensely and agonizingly tender, bleeding on defaecation, and continually discharging blood-stained mucus, which stains the linen and renders the patient's life a burden. The following plan will change the picture:

1. The bowels must be moved the last thing at night before retiring. It may be difficult to alter the usual habit of morning defaecation, but it is essential, and can be contrived by suitable aperients.

2. It is hardly necessary to say the bowels must be moved every night, but a loose action must be avoided. Even a slight degree of constipation so long as a nightly action of the bowels is secured, while not so good as an easy action, is infinitely preferable to the slightest diarrhoea. This means care and discretion in the use of aperients.

3. After the motion, and after gentle sponging with tepid water, calamine powder is to be applied in the following way: it is to be freely and thickly placed (not merely sprinkled) on a sanitary wool and gauze pad. It is cheap enough, but it need not be wastefully used if care be taken that there is a sufficient quantity (say a couple of teaspoonfuls) on the exact part of the pad which will remain in contact with the piles when the tapes are tied round the waist. It is necessary that the pad should be pulled firmly up into position.

If there is much discharge the pad should be changed in the morning and fresh calamine applied. If at first there is too much discomfort during the day, it is permissible to substitute ointment—for example, hamamelis—thickly applied on the pad worn during the day. But it must be explained that this is a step which somewhat retards results and does no permanent good. If the patient has the misfortune to have the bowels moved in the morning or during the day he will almost certainly have to be allowed to use ointment on the pad which he then applies, to be changed for the powder at night.

It will be found that after a time, probably not more than a fortnight or three weeks even in the bad case we

have supposed, the piles will be sufficiently shrunken and dried and painless by the morning for the daily pad to be dispensed with, unless the misfortune alluded to occurs. Meanwhile, those of the piles normally inside, but which prolapse on defaecation, are coming into contact with the calamine before their gradual return during the night, and, subjected to its astringent action, are becoming smaller and less sensitive.

After a further lapse of two or three weeks the patient will find that, although there may be some prolapse of the internal piles on defaecation, this is so readily reduced, or reduces itself on attaining the recumbent position, that he can begin to leave off the pad at night, unless he has been either too constipated or too relaxed. He is then in a fair way to being cured. He must always have his bowels moved at night, and he is wise to have calamine and a pad available. It is, in my experience, quite futile to attempt to apply the powder in any other way than that described.

The habit of a nocturnal action of the bowels, which allows the immediate assumption for many hours of the recumbent posture, will go far to prevent any further prolapse of such piles as remain inside the anus; and I believe that in this way it will ultimately cause their reduction in size; because it is the persistence of the partial prolapse which normally occurs in defaecation which has gone far to bring them to their condition at the beginning of treatment. I assume that the haemorrhoids are not due to any direct obstruction to the portal circulation or to any local cause such as pregnancy or growth; and that exercise and limited diet will be advised.

With this alternative to operation—an alternative which is inexpensive, which entails no danger, no interference with business, and which is likely to be permanently successful—I think I am justified in my heretical proposition that operation is usually unnecessary and rarely justifiable. The remedy is almost as simple as dipping seven times in Jordan; and for that reason, doubtless, there will be those who prefer that the surgeon should "strike his hand over the place" by way of operation. Likewise, there will be the advocates of Abana and Pharpar in the shape of ointments and lotions. None the less, I hope there will be others who will emulate Naaman and decide to give this method a trial, for I have had such excellent results with it in the past three years that personally I shall advise operation only as the last resort.

RESECTION OF INTESTINE FOR ACUTE INTUSSUSCEPTION: TWO CASES OF RECOVERY.

BY

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THE published results of enterectomy in cases of acute intussusception in infants show such a high mortality that the following cases, each of a rather unusual type, may be of interest.

Rowlands and Turner¹ quote Gibson, who says that in his collection of 1,000 cases he found only one case of recovery after resection for this condition. In an earlier collection of 239 cases there was no recovery from irreducible intussusception in a patient under seven years. Moynihan² quotes A. E. J. Barker, who says he had never seen a recovery after resection in a gangrenous case, and never expected to see it. Fagge² reported 5 cases that were irreducible and all were fatal.

CASE I.

John C., aged 3 years, was admitted to the Manchester Royal Infirmary on December 11th, 1919. His mother stated that he had not been well for a week. He had been vomiting continually, and his bowels had not been moved for five or six days. No blood had been passed as far as she knew. The child looked ill, the temperature was subnormal and the pulse 130. The abdomen was very distended, and no tumour was palpable. On rectal examination a little blood and mucus remained on the finger-stall.

A diagnosis of intussusception was made, and laparotomy immediately carried out. Owing to the child's poor condition,

Mr. K. B. Pinson kindly gave gas and oxygen anaesthesia. The abdomen was opened by a right rectus incision, and a tumour, extending to the splenic flexure, was discovered. This was reduced easily at first by expression. After the gut had been reduced through the ileo-caecal valve, it was seen to be a double intussusception, an ileo-caecal being superimposed upon an enteric intussusception. The terminal portion of the ileum was found to be in a bad condition; it was irreducible, and there were several gangrenous patches which had perforated during the attempt at reduction. It was therefore decided to resect this portion of the ileum. This was rapidly carried out, and an end-to-end anastomosis performed between the cut ends, two layers of linen thread being used for the suture line. The portion of gut excised measured 10 in., and there were five gangrenous patches involving all the coats present. The abdominal wall was closed with through-and-through sutures of silkworm gut. The operation lasted twenty-five minutes.

Post-anaesthetic vomiting was completely absent and the child was able to take fluids immediately, shock being very little in evidence. The bowels moved the following day and each day subsequently.

Apart from a little sepsis in the wound the child made an uninterrupted recovery, and was discharged from hospital on January 13th, 1920. We have seen the boy several times since; he is in excellent health, and has had no further abdominal trouble.

CASE II.

M. R., aged 6 months, was admitted to the Manchester Royal Infirmary on December 13th, 1919. She was thin, cold, clammy and collapsed; about 7 in. of intestine carefully wrapped in newspaper protruded from the anus. The diagnosis from prolapse was not difficult, and there had been symptoms of intussusception for about twelve hours before the intestine had appeared externally.

When first seen the last two or three inches of protruded gut were very oedematous, dark purple and gangrenous. The swelling caused by the oedema quite prevented the gut from being returned through the anus, consequently the only procedure possible was to resect the intestine externally and push back the stump. This was done in the manner often known as Jessett's operation, with this difference, there being no ensheathing layer, the time usually occupied in opening and closing this was saved and the operation simplified.

The gut was pulled out still further and clamped in the healthy part thus made accessible, about 2 in. from the anus and about 7 in. from the gangrenous apex. The part distal to the clamp was now removed one inch from the clamp, and the entering (inner) layer of the intussusception sutured with continuous thread to the encircling returning layer. Only one row of sutures was applied, taking up all the coats of intestine. Some difficulty was experienced with the mesentery which was between the two layers, and made a large thick mass, and also with the disparity between the diameters of the two concentric circles of intestine. The stump was now easily reducible through the anus, and was kept in position for twelve hours by a pad of gauze on a large rubber tube in the anal canal and held there by a perineal bandage. No anaesthetic was used, the patient being practically moribund and quite motionless throughout the operation.

The point of anastomosis could afterwards be felt high up on the left side with the finger in the rectum, but there was no tendency to a recurrence of the condition. There was no post-operative vomiting, fluids were administered at once and recovery was quite uneventful. The child was seen five months afterwards; she was then quite fat and apparently in perfect health.

On examination of the part removed, the ileo-caecal valve and appendix were found at the apex—that is, the intussusception was of the ileo-caecal type. About 6 in. of intussusception were resected, which corresponded roughly to the whole of the caecum, ascending colon and part of the transverse colon, with an equivalent length of included small intestine.

In both these cases the intestine was gangrenous, and an extensive resection was necessary, but complete and uneventful recoveries followed.

The successful issue was, we consider, to a great extent due to the measures taken to safeguard the patient from the effects of shock. We suggest that shock can be considerably reduced, and the outlook therefore improved, by the following expedients:

1. *Speed in operating is essential.* Everything should be ready to hand, and the closure of the laparotomy wound should be carried out by through-and-through sutures. Suture in layers is unnecessary and expensive in time.
2. *The body heat should be preserved by bandaging the child in a suit of gamgee and the theatre maintained as warm as possible.*
3. *The anaesthetic appears closely related to the amount of shock present.* In one of our cases this was minimized by using gas and oxygen, whilst in the other no anaesthetic was used.

Shock further depends on the *water-starvation* resulting from the previous vomiting and loss of fluid. In both the