A Lecture ON INTUSSUSCEPTION.

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Definition.

AN intussusception consists, in the words of John Hunter, in the passing of one portion of the intestine into another. Except in certain rare instances, and in the multiple intussusceptions of the death agony, with which we have no concern, this passage is always of the upper into a lower portion. It may occur in any portion of the bowel, and we thus distinguish enteric, enterocolic, and colic varieties; but in the absence of some definite cause—some abnormality, congenital or pathological—the great majority of these occur in the neighbourhood of the ileo-caecal junction. We shall later on discuss the causes of this remarkable circumstance.

Anatomy.

A simple intussusception consists essentially of three tubes embracing one another—the outer layer or sheath, the middle or returning layer, the inner or entering layer. The sheath is, as we shall see, actively engaged in swallowing the other two layers, which are entirely passive. The sheath is therefore called the intussusciens, the other two layers being together the intussusceptum. The end of the intussusceptum is called the apex, the upper end of the intussusciens is the neck. This is, of course, the simplest form of intussusception. Double and treble varieties are not infrequent.

Let us now examine in greater detail the three tubes or layers we have just defined. The peritoneal coats face respectively outwards in the sheath, inwards in the returning layer, outwards in the entering layer. The sheath and the returning layer have, therefore, their mucous surfaces in contact, and whilst this stimulates the sheath to contract, it renders adhesions between these layers most unlikely. The returning and entering layers, on the other hand, have their peritoneal surfaces in contact, and early adhesion between these layers may be expected. In fact, such adhesion in the neighbourhood of the apex, or oldest part of the intussusception, is almost invariable in acute cases of any standing, and may offer a serious obstacle to reduction. These two layers are therefore rightly grouped together as the "intussusceptum."

Causation.

Intussusceptions are produced by a perversion of the normal mechanism of intestinal propulsion. We shall therefore briefly describe the normal mechanism and then discuss the abnormal factors which may lead to this condition.

In the normal propulsion of food the latter acts as a foreign body, exciting by its contact with the mucous membrane a reflex contraction above and a reflex relaxation below. The circular fibres above contract strongly, driving the bolus onwards; the longitudinal fibres over the bolus at the same time draw up the intestine over it as a sleeve, taking their purchase from the fixed constricted ring above. Now, an invaginated portion of intestine will act as a foreign body, and will tend to be driven onwards by this normal intestinal mechanism. The primary occurrence of the invagination depends upon certain abnormal conditions.

Of these abnormal factors, by far the most important is prolapse of the mucous membrane at the ileo-caecal valve. It is not sufficiently recognized that in this region we have a thickening of the circular muscular coat of the last few inches of the ileum forming a detrusor, and terminating in a tonic ileo-colic sphincter, both exactly comparable to the corresponding structures in the rectum. It is therefore not surprising that prolapse of the mucous membrane at this point is common, and exactly as in rectal prolapses this "foreign body," embraced by the

sphincter, will induce increased spasm, with congestion and swelling of the prolapse. But here the conditions diverge. A rectal prolapse projects into the air, and is largely increased by straining, being driven out by the resulting increase in intra-abdominal pressure. An ileo-caecal prolapse, on the other hand, projects into the large bowel, which grasps the swollen mass and endeavours to drive it onwards, whilst abdominal pressure, acting equally in all directions, has no power to either accelerate or retard its advance.

A second group of cases depend for their causation on growths, innocent or malignant, in the bowel wall, and on swollen Peyer's patches. The ordinary polypus is the commonest cause in this group, and giving rise, as it does, to symptoms resembling those of the intussusception it may induce, is apt to confuse diagnosis. As long as the surface of the polyp is covered by mucous membrane it is apparently without effect, but should it become ulcerated, contractions of the bowel are induced by its contact with the intestinal mucosa, and an intussusception may readily follow.

Finally, we have the inverted diverticula—Meckel or the appendix. The former is not uncommon; the latter exceedingly rare. The diverticulum becomes inverted, and projects into the bowel, an ulcer, thickening, or growth at its apex being frequently the primary cause of its inversion.

Varieties.

It is possible to divide up intussusceptions in an infinite number of ways, and the nomenclature which has been introduced for this purpose is astonishing. For the most part it is purely artificial and absolutely useless, for it is rarely possible, except at a *post-mortem* examination, to determine the exact class to which a case belongs. For practical purposes, as Fitzwilliams and Corner have pointed out, they may all be reduced to four types as follows:

1. *Enteric*, where small intestine is alone involved.
2. *Ileo-colic*, of ileum and colon.
3. *Ileo-caecal*, also of ileum and colon, but primarily headed by ileo-caecal valve.
4. *Colic*, of large intestine only.

Any of these may, of course, form the nucleus of a multiple intussusception, double, treble, and even more complex. But the form of the nucleus is alone of practical interest. The first and last groups are obvious, but the bulk of the cases occupy the second and third groups, and, to clearly understand the distinction between these, we must study the method by which an intussusception grows.

Method of Growth.

Growth takes place at the neck entirely. There is no exception to this rule. The apex soon becomes oedematous, stiff, and swollen, and once this has happened it is impossible for the apex to change. The driving force is supplied exclusively by the sheath. As in normal peristalsis, the circular fibres of the sheath contract strongly above, driving on the stiff intussusception and forming a fixed point from which the longitudinal fibres can act. These act in one of two ways. If the sheath is loose they pull it over the intussusception like a sleeve. If it is tight they drive the intussusception onwards into it. This is the only way in which an intussusception can grow, and, as Fitzwilliams points out, the old idea is untenable that the ileum as a whole can prolapse through the ileo-caecal valve with a changing apex, as the rectum can prolapse through the anus. The latter occurrence is dependent largely on intra-abdominal pressure, and bears no relation to the case in point. The only driving force is derived from the sheath.

How, then, do we account for the common ileo-colic form? It may occur in one of two ways. It may start as a true enteric intussusception, the initial cause being perhaps a small polyp or a swollen Peyer's patch. The point of origin remains, as always, the apex, but once the apex has passed the ileo-caecal valve and drawn through the end of the ileum, the result is anatomically identical with what would be found if a prolapse had occurred. Another method seems to be more probable, though so far as I know it has not been previously described. The mucosa of the termination of the ileum is by no means firmly attached to the muscular coat. It prolapses readily, as above described, and this prolapse will still further

loosen its hold in the neighbourhood of the valve. When, then, it becomes taut and can prolapse no further, it will drag upon the muscular coat and tend to intussuscept it, not at the valve, but at a point from one to two inches above. This exactly corresponds with what is actually found, for commonly the last part of an intussusception to be reduced (and therefore the first to be inverted) is at a point from one to two inches above the ileo-caecal valve. This is thus the natural result of the prolapse of mucous membrane through the ileo-caecal valve which we know to be so common.

The distinction between the ileo-colic and ileo-caecal forms has more than a mere academic interest, for in reducing an ileo-colic intussusception great difficulty occurs in the last stage in reducing the apparent ileal prolapse. In the rarer ileo-caecal form the valve is the apex, and there is no such apparent prolapse to deal with.

Pathological Changes.

We must next study the changes which occur in an intussusception as the immediate result of its development. The mesentery is dragged in between the entering and returning layers, and is subject to traction and to compression at the neck. At first it would seem that the drag on the mesentery must very soon bring the progress of an intussusception to a standstill. But it must be remembered that the mesentery is chiefly attached about the centre of the horseshoe formed by the great intestine, a fact which greatly modifies the elongation required; and also that in infants the peritoneal attachments of caecum and ascending colon are very incomplete, and that great mobility of these parts is the rule.

The effect of this drag on the intussusception is striking. It is forced into a curved form with the concavity towards the centre of the abdomen where the mesenteric root lies. The drag being entirely on one side, the orifice at the apex is dragged out into an elongated slit, whilst the apex itself is turned over and firmly pressed against the sheath. This change in the form of the orifice is probably responsible for the old idea that the apex was usually the ileo-caecal valve, especially as it was stated that the lips of the valve could be felt per rectum.

But of far more importance is the effect of tension and compression on the vessels of the mesentery. First the veins and lymphatics are obstructed, finally the arteries. As this occurs changes in the intussusception rapidly follow:

(a) There is marked oedema with extravasation of blood, especially at the apex. The glands of the mucosa take on an abnormal activity, and blood and slime appear in stools. The apex, and to a less extent the whole intussusception, become stiff and swollen, increasing the morbid activity of the sheath, and rendering reduction more and more difficult.

(b) The adjacent peritoneal surfaces of the entering and returning layers throw out lymph, which soon glues these surfaces together, this effect being also most marked in the oldest part—namely, at the apex—making reduction still more difficult.

(c) As soon as the arterial supply is cut off gangrene sets in. And now we are faced by a grave situation, for not only is the bowel obstructed, but it is occupied by a septic mass which must be removed if the patient is to survive.

(d) Its removal occasionally, but very rarely, occurs spontaneously, and the mass consisting of entering and returning layers is passed by rectum.

All these changes are more marked in the intussusceptum the middle layer especially suffering, whilst the sheath may be almost normal. Meanwhile the patient suffers not only from obstruction, but also from absorption of septic material from the damaged if not gangrenous tissues.

These characteristic changes are only seen, however, in the acute form of the disease. In the chronic form the peritoneal attachments have time to stretch, and consequently the pull of the mesentery is of much less importance. The contractions of the bowel are less violent, and may have little or no effect on the circulation. There is thus only slight swelling at the apex of the intussusceptum, and adhesions may be absent or be limited to this region. Severe oedema and gangrene only occur if the condition becomes acute.

Clinical.

In studying a large number of cases of intussusception we find that they fall naturally into two well-marked groups—the acute and chronic forms. These present, in almost every feature, a very remarkable contrast, and will require entirely separate discussion.

Acute intussusception occurs almost entirely in infants, and three-quarters of the cases are under 1 year. It presents an absolutely characteristic group of symptoms remarkably free from variation. As a rule no obvious cause for the condition exists.

Chronic intussusception, on the other hand, is rare in infants and occurs in children and adults. The symptoms are most irregular, and in at least 50 per cent. of the cases the diagnosis is anything but the correct one, varying from tuberculous peritonitis to new growths in the lung. In a large proportion of the cases a definite cause is discovered, such as a polypus or carcinoma. The clinical course of the two forms is in similar contrast, and the treatment involves very different considerations.

Acute intussusception occurs, as we have said, for the most part in young children: 100 cases, under 12, were distributed as follows:

Under 1 year	...	...	...	...	72
1 to 6 years...	...	...	...	...	22
6 to 12 years	...	...	...	...	6

(Fitzwilliams.)

Above 12 it is rare, and, when it does occur, usually is the result of some definite cause.

But when we come to examine the cases under 1 year an even more striking result appears. Of the above 72 cases, 46 (64 per cent.) occurred during the four months from the fourth to the seventh inclusive. During the first three months the condition is exceedingly rare. Taking again cases under 12 years, two other facts of great interest appear. First, the boys outnumber the girls in the proportion of three to one. Secondly, there is a definite seasonal variation in the incidence, with sharp rises in April and December, and a great fall in numbers between.

From these statistical observations Fitzwilliams makes the deduction that improper feeding is an important factor in causation. At the fourth or fifth month the child is weaned, and after that we know only too well the sort of diet on which it is expected to subsist. And as Easter and Christmas are seasons of adult rejoicing it is considered only fair for the infant to participate.

As three-quarters of these cases occur in infants under 1 year, and as these are of a constant and characteristic type, we shall now describe in some detail the symptoms and signs of this group.

ACUTE INTUSSUSCEPTION OF INFANTS.

The child is usually well nourished and in perfect health. It rarely occurs in a child the subject of colitis or summer diarrhoea. The sudden onset of this severe condition in a fat and healthy baby is most characteristic. As a rule it starts with a severe and sudden abdominal pain, coming on in acute attacks with intervals often of complete relief. The child may vomit, but never to any great extent. Tenesmus is a marked feature, the child straining incessantly, but only passing a little blood and slime. At first a motion or two may be passed, but after this there is absolute obstruction, and no trace of bile will be found on the napkin. This sign, which was first pointed out by Barnard, is almost infallible, and should in every case be part of a routine examination. The blood and mucus are exuded from the intussusception in sufficient quantity to soon clear the lower bowel of its contents, in view of the violent peristalsis which is occurring.

On examining the child in a typical case the abdomen will be fairly lax unless the child is actively straining. In the course of the colon a tumour may be felt. It has very definite characteristics:

1. It is in the region of the transverse or descending colon.

2. It gradually shifts its position, advancing along the colon and increasing in extent.

3. It is sausage-shaped and of horseshoe form, the concavity being towards the centre of the abdomen.

4. Manipulation causes it to contract and become hard. This hardening is accompanied by an attack of pain and an increase in the tenesmus. The characteristic feature

is that, although the tumour may not be very tender, and manipulation may cause no instant pain, the pain rapidly follows and continues long after manipulation has ceased.

5. The apex may be felt by rectum.

The presence of this tumour is the essential sign of intussusception, and it is probable that if proper methods are adopted it may be discovered in all cases. A few words as to the examination of an infant's abdomen may therefore not be out of place.

First try without an anaesthetic. Sometimes the tumour may be felt at once, for between attacks of pain the abdomen may be quite lax. Usually, however, the child begins to cry, and the examination is given up as hopeless. This is an entire mistake. The abdomen of a crying infant can be readily palpated if the surgeon has patience and skill. Every now and then the child must inspire, and for an instant the abdominal wall is absolutely lax. This is the surgeon's opportunity, and yet it requires a nice touch to obtain satisfactory results. The slightest roughness is met by instant rigidity. The hand must be felt to form part of the abdominal wall, and to move with it, and at the instant of relaxation, when the diaphragm also moves downwards, the hand should perceive objects moving into contact with it from inside rather than attempt to reach these objects by a sudden plunge. With these precautions, the abdomen of a crying infant can be deeply palpated with certainty.

In any case of doubt an anaesthetic should be given. This enables one to carry out a most important manoeuvre, first suggested by Sir Frederic Eve—I mean a bimanual examination. A finger in an infant's rectum can, in conjunction with a hand outside, explore practically the whole abdomen. If after such an exploration no tumour is found, the case is probably not one of intussusception.

Contrasting with the tumour, a vacant space may be felt in the right iliac fossa—the famous Signe de Dance. It is the contrast between an empty and a full area that is of importance rather than the actual void itself. I would repeat that the abdomen as a whole is not rigid. Rigidity, apart from straining, and distension are signs that the case has gone too far for operation to be of any avail.

Let me recapitulate the cardinal signs of the acute intussusception of infants:

Pain, in sudden severe attacks.

Tenesmus and constant straining.

Blood and mucus in stools, and *no bile*.

Tumour, varying in consistency, increasing in size, advancing in position with each attack of pain.

Treatment.

The only treatment of intussusception is immediate laparotomy. Inflation by rectum is both useless and dangerous. Useless, because it rarely even appears to succeed, and because any reduction effected is almost always incomplete and rapidly recurs. Dangerous, because it increases shock, wastes valuable time, and may do considerable damage. It was only justifiable in the days when the mortality of laparotomy was cent. per cent.

Precautions are taken for the avoidance of shock, the child being wrapped in wool and placed on a hot-water pillow in a hot theatre. The abdomen is opened through the right rectus, slightly below the middle. Two fingers are introduced and the bulk of the intussusception rapidly reduced, with sometimes an assistant's finger in the rectum. The last few inches may resist reduction. This portion of the gut will now be opposite the wound, and can be readily brought completely outside the abdomen, where it is carefully protected with hot pads. The reduction of these last few inches is always the crux of the operation. The mass is grasped in the left hand and gently, but firmly, squeezed. It will gradually unroll at the neck. Very slight traction on the entering layer is permissible, and may be necessary in the last stage, especially in the ileo-colic form. But the pressure of the left hand is the essential part. This not only tends directly to unroll the neck, but squeezes lymph out of the swollen apex, and enables it to pass the more easily. The peritoneum will probably crack at one or more places, but this must be disregarded. Complete reduction is essential. Very often the arrival of the appendix indicates the end. Any cracks in the peritoneal coat are closed with fine silk. The abdomen is closed by through-and-through sutures of

silkworm gut. The layers are too delicate for separate suture, and speed is essential. The after-treatment is simply directed against shock. Saline injections, either by rectum or subcutaneous, are started at once, and, if possible, kept up continuously. I would lay stress on the importance of the child receiving the fluid at a proper temperature (100°). Too often it cools in unprotected tubing, and is practically delivered as cold water. Adrenalin or pituitary extract are useful as accessories. Strychnine can only do harm, and should be entirely avoided.

But we may find that, in spite of every effort, the last few inches are irreducible, adhesions binding together the peritoneal coats or the apex being too large to pass the neck. This is a serious complication, for the continuity of the bowel must at all costs be restored. A faecal fistula is very unsatisfactory in an infant, and excluding, as it here does, the whole of the large intestine, is almost invariably fatal. Resection is attractive, but unjustifiable unless gangrene is present, for there is no recorded case of an infant under 1 year surviving this operation. Without any doubt, the best treatment is to bring the small and large intestines into apposition as close to the irreducible portion as is safe, and perform a lateral anastomosis. This relieves the obstruction and prevents a recurrence of intussusception. The irreducible part may gradually reduce itself, or may remain as a permanent condition, or the intussusceptum may slough away and be passed by rectum.

If the intussusceptum is gangrenous we have no choice but resection. In such a case Jessett's operation is probably the most hopeful, and certainly the easiest, to perform. A longitudinal opening is made in the sheath in a healthy region. Through this the intussusceptum is protruded till healthy tissue is reached. It is transfixed by two sutures at right angles and amputated. The sutures are divided so as to provide four sutures equally spaced round the stump and piercing all the coats. They are now tied and the stump returned into the sheath, which is closed by two layers of sutures. Two or three Lembert sutures may be inserted at the neck after as complete reduction as possible. In some cases direct resection with closure of the ends and lateral anastomosis may be more convenient. In an infant success is practically hopeless, though the attempt should be made, but after 5 years old several cases have recovered.

INTUSSUSCEPTION IN CHILDREN AND ADULTS.

In studying cases of intussusception occurring after the first year of life we are at once struck by three features in which they contrast forcibly with cases in infants. In 70 per cent. of the cases a definite cause can be discovered; they tend to be chronic; the symptoms are irregular.

Causation.

In an extensive series of cases (Eliot and Corscaden) the following were found to be direct causes:

1. Tumours were found in 40 per cent. Of these 24 per cent. were innocent and included mucous polyps, fibromata, lipomata, submucous haemorrhages; 16 per cent. were malignant—carcinomata and sarcomata.

2. Ulcers were found in 14 per cent., and were due to typhoid, dysentery, and tuberculosis.

3. Meckel's diverticulum (inverted) was the cause in 12 per cent.—a very remarkable number considering the comparative rarity of this abnormality.

4. Trauma, such as a blow or a violent strain, was a definite cause in a few cases.

We have already discussed the manner in which these causes act.

Chronicity.

More or less acute attacks occur, with intervals during which the patient is free from any acute symptom and only complains of general poor health. The attacks become more frequent and severe as time goes on, but they may go on over a period of from a month to a year.

Symptoms and Signs.

* Pain is always a prominent feature. At first the attacks of pain are sudden and severe, and may cease as suddenly as they began. As, however, adhesions form and tend to check the progress of the intussusception, the pain takes

on a different character, and its onset and cessation are both more gradual.

Vomiting occurs in two forms, which should be carefully differentiated. With the pain we have the bilious vomit due to dragging on the mesentery. Apart from pain, and in the later stages, we have the dark vomit of intestinal obstruction, with all the grave characteristics of that condition.

Wasting and anaemia are always marked, and frequently lead to a false diagnosis, such as tuberculous peritonitis or carcinoma.

Either constipation or diarrhoea may be present. The former is more usual in enteric intussusceptions; the latter occurs in colic cases, and is accompanied by the passage of blood and mucus.

A tumour is to be felt in the abdomen in most, if not all, of the cases. It presents the characteristics we have already described. In form it resembles a concave sausage. With each attack of pain it becomes firm, increases in size, and advances in position, following always the path of the colon. In 30 per cent. of all cases its apex can be felt by rectum. It is tender and manipulation brings on an attack of pain.

The abdomen is not distended till obstruction has become a marked feature. Emptiness on the right side and fullness on the left are frequently noticed and are very characteristic.

Such are the symptoms of a typical case, but they may occur in such masked form that diagnosis is practically impossible. Of 55 cases collected by Rafinesque, 27 were incorrectly diagnosed, and other writers give an even larger percentage of error. A patient with wasting, obscure attacks of pain, and an indefinite tumour presents a fairer picture of the average case, and suggests a wide field for diagnosis.

The treatment of these cases only differs from that of the acute infantile form in a few details. Laparotomy is as essential in the one as in the other, but here we are dealing with an older patient, and extensive operations can be successfully carried out. And we have the further incentive to resection that we can thus remove the cause, which so often is of a definite nature in these cases. Once the condition is suspected operation should not be delayed, for many cases terminate with startling abruptness in a few hours, and, in any event, operation during an acute exacerbation is a very grave proceeding. Spontaneous recovery is rare, for although cases where the intussusceptum has passed by rectum are not very common, the great majority of these have died.

I have only dealt with the leading features of a very wide subject. Those who wish to study it in greater detail will do well to refer to the papers I mention below. In these full references to the literature will be found.

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THE first State dental clinic for school children was opened in Vienna on March 13th.

On January 15th, 1913, the total number of students in the medical faculties of France was 8,247. Of these 7,400, among whom were 803 foreigners, were men, and 847, of whom 358 were French and 489 foreign, were women. The schools as distinguished from faculties of medicine had 1,497 students, of whom 1,287, including 29 foreigners, were men, and 210 women, of whom 9 were foreign. The numbers for the several faculties were as follows: Paris, 4,211, as against 4,170 in 1912; Lyons, 1,055; Bordeaux, 751; Montpellier, 699; Toulouse, 346; Nancy, 306; Lille, 285; Algiers, 156. Among the medical schools Nantes stood first with 255 students; next came Marseilles with 245, and Rennes with 148. The others had numbers ranging from 52 (Limoges) to 220 (Grenoble). Of the foreign students the most numerous were the Russians, of whom there were 831. Of these 585 belonged to the Paris Faculty, and 133 to Montpellier. Next came the Turks, of whom there were 85; of these 68 belonged to Paris and 11 to Montpellier. There were 67 Bulgarians, of whom 20 were at Lyons, 28 at Montpellier, and 12 at Nancy. There were 59 Roumanians, of whom there were 54 in Paris and 5 at Montpellier. Among other nationalities represented were England (13), Greece (24), South American Republic (22), all studying in Paris.

REMARKS ON TRANSVERSE COLOSTOMY AS THE OPERATION OF ELECTION.

BY

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IN 1906, at a meeting of the old Clinical Society,¹ I ventured to draw attention to the question of the transverse operation of colostomy as opposed to the iliac method, and stated my belief that, of the two methods, the former was for many reasons the best. My views were at that meeting subjected to some criticism at the hands of certain leaders of the profession who had no better arguments to adduce than that the old iliac operation had always answered very well, that the control of faeces could not in the nature of things be so complete in the transverse operation, and that the length of colon excluded, being so much longer than that left by an iliac colostomy, could not but be a source of trouble.

I received these criticisms, coming as they did from such eminent authorities, in a somewhat chastened spirit, until on making inquiries I found that these gentlemen themselves had had very little more experience of transverse colostomy than I had myself, and two of them acknowledged that the question of anything better than the iliac method had never suggested itself to them. I therefore concluded that I had at least some ground for speaking on the subject.

Since that time I have continued to practise the operation of transverse colostomy as a routine method, and, judging from my own results, I have now very little doubt that the claims I put forward in 1906 were well founded; so much so that were I ever in the unfortunate position of having to undergo the operation of colostomy myself, I would stipulate most strongly for its performance by the transverse method, provided that the conditions permitted of its being done.

I am fully aware of the fact that the cases I have operated upon are not so numerous as to command the attention of surgeons who will never condescend to consider anything less than four-figure statistics, nor of those members of the profession who, being attached to the staffs of hospitals dealing solely with rectal conditions, are perhaps apt to look upon the work of others in their special domain as that of the unauthorized. It is not to such that I propose to address myself, but to those who, like myself, being attached to the staff of a general hospital, while dealing with a smaller number of such cases, have, from the varied nature of their work, developed a wider and perhaps more broad-minded outlook on surgery generally. I do not propose for a moment to attempt to defend the operation of colostomy, or make it out to be anything better than an unfortunate, and usually solitary, alternative to a very dreadful and necessarily fatal condition; it should never under any circumstances be performed if any better way out of the difficulty can be found; but that it merits the expressions of loathing and horror that are so frequently heaped upon it by those who have not stopped to consider its purposes, its results, and its surgical technique, I would most strenuously deny. Nothing is further from the truth than to say, as I have often heard said: "Better be dead than have a colostomy done."

It was with much interest and serious reflection that I read Mr. Paul's most excellent opening address in surgery at the meeting of the British Medical Association at Liverpool,² and while I realized that any statement coming from so well-known and famous a master of his craft as Mr. Paul must be accorded an attentive hearing, I must confess to no small measure of astonishment that not only does he advocate the lumbar route (which has long been considered obsolete) as a better method than the iliac, but that he refuses any place to transverse colostomy, and openly advises that it should never be performed. With all respect to Mr. Paul I would submit reasons why iliac and lumbar colostomy are not and cannot be in any way comparable to transverse colostomy, which, after practical experience, I have come to regard as the method *par excellence* from every point of view.

If we are to arrive at the ideal we must first of all have