COLOSTOMY

INDICATIONS, MANAGEMENT AND COMPLICATIONS

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Colostomy—'The object of this operation is to make an artificial outlet for the faeces, either temporarily or permanently, by establishing an opening between the skin surface and some portion of the colon' (Lockhart-Mummery, 1934).1

The size of the problem
In 1966, 7,684 operations were performed for rectal cancer in National Health Service hospitals in England and Wales. About 5,000 of these operations involved the formation of a permanent colostomy2. In the Newcastle Regional Area one colostomy is made per 4,000 population per annum, and two-thirds of these colostomies are permanent3. It has been estimated that there are more than 100,000 patients with permanent colostomies alive in Great Britain4.

Historical
The consequences of opening the bowel have been known since earliest antiquity. In the Bible we read how Ehud stabbed Eglon, King of Moab. Eglon's bowel was perforated and he subsequently died:

'And Ehud put forth his left hand, and took the dagger . . . and thrust it into his belly. And the shaft also went in after the blade: and the fat closed upon the blade, so that he could not draw the dagger out of his belly; and the dirt came out.'—Judges, 3, 21–22.

Spontaneous formation of intestinal fistulae sometimes allowed persons with bowel injury or obstruction to survive. Cheselden, surgeon to the Royal Hospital, Chelsea, and St. Thomas's Hospital, records such a case in 17845. The patient, Margaret White, of the Fishmongers' Almshouses, Newington, Surrey, had an obstructed umbilical hernia which sloughed, and the colon protruded at the umbilicus. Cheselden trimmed the necrotic bowel so that the patient survived with a colostomy, living for many years and 'voiding the excrements through the intestine at the navel' (Fig. 1).

The first successful deliberate colostomy operation was in 1793, when Duret formed an iliac colostomy for imperforate anus in a 3-day-old child. The patient lived for 45 years after the operation6.
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Despite the occasional success, colostomy operations carried a high mortality, largely due to contamination of the peritoneal cavity and fatal peritonitis. To obviate this hazard Amussat, in 1839, introduced the extraperitoneal lumbar approach to the colon. The operation of extraperitoneal lumbar colostomy had the advantage of not opening the peritoneal cavity, but it had serious drawbacks; it was a blind procedure, and often the surgeon had little or no idea what the underlying pathology causing the obstruction was; the stoma was placed in the flank and was difficult to manage; and lastly, because there was no established continuity of bowel epithelium to skin, the stoma had a great tendency to stricture and stenosis.

These complications of lumbar colostomy revived interest in abdominal colostomy as we know it today. This revived interest was brought
to fruition by Allingham in 1887. Allingham recommended bringing the loop of bowel to the skin surface, suturing the seromuscular layer to the skin to prevent retraction, and then excising the antimesenteric surface of the bowel to give a double-lumen colostomy. With the addition of a supporting rod through the mesentery this was the method of temporary colostomy formation used in most centres until quite recently.

Excision of an obstructed tumour of the large bowel combined with temporary colostomy was introduced by Bloch in 1894. This technique was described subsequently by Paul and by Mikulicz. Bloch and Mikulicz mobilized the tumour and exteriorized it. Some days later, after the bowel serosa had become firmly adherent to the wound margin, they excised the tumour. The double-barrelled colostomy that resulted was subsequently closed using an enterotome to crush the spur between the two limbs of the colostomy. Paul described a similar operation of mobilization and exteriorization of the tumour, but he sutured the two limbs of the bowel together, removed the tumour as soon as it was exteriorized, and fitted the colostomy up with specially designed glass tubing, etc. Again he closed the colostomy by first of all crushing the spur with the enterotome. The operation described by Paul was popularized on the Continent by Kocher and in England by Moynihan in their respective textbooks of operative surgery (Fig. 2).

The basic concept of the simple colostomy operation has remained unchanged since Allingham's paper and subsequent book of 1892, though modifications have been introduced to overcome complications of the basic technique. These include primary colocutaneous suture, introduced by Patey in 1950 and combined with rectal excision by Butler in 1952, and the technique of extraperitoneal end colostomy devised independently by Sames and Goligher in 1958.

**Temporary colostomy**

**Indications.** Colostomy may be indicated as an initial operation in the emergency management of lesions of the left colon or rectum, or as a first stage in operations on the left colon or rectum.

Thus temporary colostomy is indicated as the first stage of surgical correction of anorectal dysgenesis, imperforate anus, and rectovesical, rectourethral, and rectovaginal fistulae. In these cases the colostomy is best placed in the right transverse colon, thus allowing unfettered access to the pelvic region when the later reconstructive operation is undertaken. Quite apart from the immediately beneficial effect that the colostomy has in overcoming intestinal obstruction, it also allows the distal bowel to be cleansed and subsequent surgery to be carried out in a clean, sterile field.
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A temporary colostomy may be indicated in infancy or childhood in cases of Hirschsprung's disease. In these cases it is essential that the colostomy be formed in normal bowel—that is, proximal to the aganglionic segment. In cases of Hirschsprung's disease the site of election is usually the right transverse colon, again to allow access to the pelvis for subsequent surgery and to leave as long a segment of 'mobile' bowel distal to the colostomy as possible.

Fig. 2. An illustration of a double-barrelled colostomy with glass tubing sewn into it, taken from Kocher's Text Book of Surgery, published in 1907. This operation was devised independently by Bloch of Copenhagen, Mikulicz of Breslau, and F. T. Paul of Liverpool.

Colostomy is indicated as an emergency procedure in anorectal wounds and indeed in wounds of the left colon. In these instances it is often best to exteriorize the injured segment of bowel, leaving the proximal end on the body surface as a functional anus and the distal end, again on the body surface, as a mucocutaneous fistula to decompress the distal bowel.

High fistulae-in-ano with internal openings above the anorectal ring are notoriously difficult to treat. In many of these cases a proximal
colostomy, by diverting the faecal stream, may allow suppuration to settle and then permit the surgeon to undertake closure of the internal opening of the fistula in a clean field.

Temporary colostomy is indicated in the emergency treatment of perforated or obstructed diverticular disease of the sigmoid colon and in perforated or obstructed carcinomata of the left colon. Obstruction of the right colon is rarely if ever a reason for colostomy; primary resection of tumours of the right colon with anastomosis of small gut to left colon does not carry the same risk or perils as primary resection and anastomosis of the left colon.

**Siting.** The site of election for a temporary colostomy is in the right transverse colon. At this site the colon is mobile, has a broad mesentry, and can be brought to the surface easily. The omentum which is attached to the transverse colon can be readily dissected free and used to surround the bowel as it is brought through the parietes and thus further reduce the risk of peritoneal soiling. Above all, a right-sided transverse colostomy leaves plenty of 'mobile' bowel distally with which to accomplish subsequent resection and reestablish continuity by anastomosis. In cancer surgery the colostomy should never be sited close to the growth which will need subsequent resection. A colostomy close to a tumour may become colonized by cancer cells at the suture lines and thus compromise later radical surgery.

The disadvantage of proximal temporary colostomy is that the patient requires three operations to cure his condition—first the operation to make the colostomy, then the resection of the underlying lesion and anastomosis of the bowel, and thirdly and finally closure of the temporary colostomy. It has been suggested by some authorities that by siting the colostomy close to the offending lesion the colostomy could be excised along with the lesion and continuity of bowel reestablished at a second operation\(^\text{20, 21}\). This means that the patient would have to undergo only two operations. On rare occasions a colostomy close to the lesion may be justified, but the risks of implantation of cancer cells and the technical problems of doing a bowel resection when the field is obscured by a fixed colostomy generally outweigh any advantages, and the right-sided temporary colostomy is to be preferred as an emergency procedure or as part of a staged resection of a left-sided colon lesion.

**Techniques**\(^\text{22, 23}\). The most extensively used technique of temporary colostomy is the loop colostomy using a rod of plastic, glass, or rubber tubing to support the loop of colon on the body surface and also serving to make an effective spur so long at it remains in situ.

A right-sided transverse incision is employed, the incision is about 5 cm long, and the anterior rectus sheath is divided transversely over
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the whole length of the skin incision. The rectus muscle is then split vertically (in the direction of its fibres), taking great care to avoid tearing the epigastric vessels which run on the deep surface of the muscle. The posterior rectus sheath is opened transversely and the loop of right colon identified. After the omentum has been dissected free from the colon over an extent of 7–10 cm the bowel is drawn to the surface through the incision. A rod is then passed through the mesen-

tery to support the bowel on the surface (Fig. 3); this rod is fixed in place usually by placing rubber tubing on each end to prevent it falling out.

The colon is immediately opened longitudinally through the prominent antimesenteric taenia. After the bowel has been opened, often with explosive decompression of the obstructed colon, the edges are spread out and primary suture of the mucosa to the skin edge per-

Fig. 3. The technique of temporary colostomy as described by Dr. R. B. Turnbull, Jr., and Dr. F. L. Weakley of Cleveland, Ohio, U.S.A., in 1967. Reproduced by permission from Turnbull and Weakley's Atlas of Intestinal Stomas. St. Louis, The C. V. Mosby Co., 1967.

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formed. This colocutaneous suture is done with chromic catgut on a cutting needle. Immediate colocutaneous suture allows the colostomy straight away to be effective in relieving intestinal obstruction; it prevents infection in the pericoloostomy tissue and, by facilitating epithelium-to-skin healing, prevents the formation of scar tissue and subsequent stenosis. After some seven to ten days healing around the colostomy will be sufficiently advanced to allow the rod to be removed without danger of retraction of the colostomy. Removal of the rod greatly facilitates nursing management.

A loop colostomy as described is a simple and effective colostomy operation; it does, however, have the drawback that it does not absolutely defunction the distal bowel. No matter how thick the supporting rod or how prominent the spur, some faecal matter always seems to get propelled into the distal loop. In most cases this is not greatly disadvantageous, but in cases where absolute defunctioning of the distal bowel is imperative Devine's colostomy is preferred. In this operation the bowel is divided and the two ends brought out of the abdominal wall separately and at some distance from each other. This technique is invaluable in the staged repair of rectoperineal anomalies and in severe pelvic trauma.

Another variation of the operation of temporary colostomy has been described by Turnbull and Weakley. Their 'decompression colostomy' or 'vent colostomy' is a method of establishing a fistulous connection between a distended colon and the body surface to overcome acute intestinal obstruction. They point out that a simple 'vent colostomy' is easy to form and is an effective method of releasing pent-up gases and fluids in left-sided large-bowel obstruction. Turnbull has extended this concept and advised the use of a series of vent colostomies in the seriously ill patient with acute fulminating ulcerative colitis who is severely shocked and unfit to withstand immediate proctocolectomy. Most surgeons in Britain do not use this operation of 'vent colostomy' and opinion here is that proctocolectomy is the treatment of choice for acute ulcerative colitis.

**Closure.** The timing of colostomy closure calls for fine surgical judgement, and each case must be carefully considered before a decision to operate is made. Some general principles about timing can be stated.

1. Never attempt to close a colostomy if there is any obstructive lesion in the bowel distal to the colostomy. Colostomy closure is impossible in these circumstances—the suture line will give way in the face of colonic obstruction and faeces may then be discharged into the peritoneal cavity; at best a faecal fistula will ensue.

2. If the colostomy has been made for the complications of diverticular disease the diseased colon must be resected before an attempt is made.
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to close the colostomy. Failure to resect the diseased bowel will lead to recrudescence of the diverticulitis and/or breakdown of the colostomy suture line.

3. If the colostomy is proximal to an anastomosis in the left colon—for instance, a colostomy ‘covering’ a sigmoid colectomy—every effort should be made to close the colostomy as soon as the anastomosis is healed—that is, about 2 weeks after the anastomosis; the passage of formed faeces through the healing anastomosis gently dilates it, keeps it patent, and prevents stricture formation.

Before closing a colostomy it is often useful to assess the patency and structure of a distal anastomosis. With an anastomosis at 20 or less centimetres from the anus careful sigmoidoscopic examination without over-distension of the bowel by air will enable the surgeon fully to examine the suture line. I have found this manoeuvre invaluable when trying to decide the timing of colostomy closure after anterior resection of the rectum. With higher anastomoses after sigmoid or left hemicolectomy barium enema examination without air insufflation can be used to achieve visualization of the suture line and assess its dimensions and soundness to air and fluid leaks. If barium examination is carried out, all the barium must be washed from the distal colon before closure is done. Failure to wash out the barium will lead to inspissated masses of faeces and barium in the distal colon causing subacute obstruction, thus compromising the suture line of the colostomy closure.

Before closure of a colostomy it is well to cleanse the distal colon by washing it through with warm water containing neomycin sulphate (0.5 g/l.) administered either through the distal colostomy opening or per rectum. Similarly the proximal bowel can be partly sterilized and the faecal content reduced and made soft by the administration of purgatives and antibiotics by mouth and by reduction of solid food intake preoperatively. My practice is to give 0.5 g of neomycin sulphate and 1 g of phthalysulphathiazole 6-hourly for 48 hours before operation.

The detailed technique of colostomy closure is most important. There are five essential steps in the operation:

1. Careful mobilization of the colostomy loops. These must be dissected free of skin, muscle, and peritoneum and be easily delivered from the abdomen.

2. Excision of the skin/mucous membrane epithelial margin of the stoma.

3. Splitting of the antimesenteric wall of the bowel to enable a broad oblique end-to-end anastomosis to be made.

4. Closure of the bowel in two layers. First an accurate all-coats suture turning the mucous membrane in; a Halsted suture tech-
nique using 3/0 chromic catgut is best for this. Then an outer seromuscular layer of interrupted 1/0 silk or linen sutures. A nearby piece of omentum can then be tacked over the suture line with one or two sutures and the bowel returned to the peritoneal cavity.

5. Closure of the defect in the anterior abdominal wound, layer by layer, with drainage.

Complications of colostomy closure. Colostomy closure has a notorious and probably undeserved reputation for complications. These complications include peritonitis due to leakage at the suture line, faecal fistula formation (which always settles spontaneously if there is no distal obstruction), wound sepsis, and subsequent incisional hernia formation. Thomson and Hawley have done a valuable service in reviewing the outcome and complications of colostomy closure at St. Mark's Hospital, London. They point out that while the operation has a bad reputation for morbidity, they have been unable to confirm this. Whereas Knox, Birkett, and Collins, reported an incidence of faecal fistula of 23% and a mortality of 2.2%, Thomson and Hawley showed an incidence of breakdown at the site of closure of 2.9%, and no deaths in 139 cases. Both Knox, Birkett, and Collins and Thomson and Hawley report that the incidence of complications seems to be related to the time interval between establishment of the colostomy and its closure; the longer this interval the fewer the complications.

Permanent colostomy

Indications. The principal indication for permanent colostomy is malignant disease of the rectum or anus. Usually in these cases excision of the rectum and anus is carried out and the permanent colostomy established at the same operation. Such a colostomy is formed from the sigmoid colon; it is at the end of the bowel—terminal colostomy—and usually placed in the left iliac fossa. Rarely a permanent terminal colostomy may be required for irreparable trauma to the bowel and in elderly women with severe rectal prolapse which is not amenable to surgical correction.

There are certain requirements which must be met when constructing a permanent (terminal) colostomy after excision of the rectum. These are:

1. The bowel must be drawn through the anterior abdominal wall to the body surface without tension.
2. The 'lateral space'—that is, the paracolic gutter lateral to the bowel—must be closed to prevent entrapment of small intestine and volvulus around the colostomy. This closure of the lateral space may be accomplished either by a non-absorbable suture
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picking up parietal peritoneum, mesocolon, and bowel serosa or by making the colostomy 'extraperitoneal'\(^{18},^{19}\).

3. The stoma must be suitably placed for subsequent management; not too near the anterior superior iliac spine, not too near the umbilicus, and never on the waistline.

4. A disc of skin about 2 cm in diameter must be excised and primary suture of the colon margin to the skin edge carried out\(^{16}\). By this means sepsis about the colostomy is reduced and scar stricture formation prevented.

Structural complications. There are five structural complications of colostomy: retraction; stenosis; prolapse; obstruction around the colostomy; and herniation adjacent to the colostomy.

Retraction is a complication of both a temporary loop colostomy and of a permanent terminal colostomy. A loop colostomy which is drawn out of the abdomen under tension, particularly in an obese person, may retract after the supporting rod is removed. Retraction under these circumstances will compromise the 'spur' of the colostomy and render it less efficient as a defunctioning colostomy. Retraction of a terminal colostomy may also be associated with tension but may have an element of ischaemia in it too. Retraction, when it occurs, is commonest in the immediate postoperative period. When it happens operation is always necessary to reestablish the colostomy at a more favourable site.

Stenosis is uncommon nowadays since the introduction of immediate colocutaneous suturing. Should stenosis occur, the skin level stricture will need to be excised and formal colocutaneous suture carried out.

Prolapse of the distal limb of a transverse colostomy happens from time to time. The best management is to reduce the prolapse manually and then to expedite closure of the colostomy.

Obstruction. Failure to close the 'lateral space' about a permanent colostomy can lead to this complication, which was first described by Gabriel in 1928\(^1\). Should the complication occur, immediate surgery is necessary to undo the volvulus of the small intestine.

Herniation through the abdominal musculature around a permanent colostomy is very frequent, particularly in older patients. It may make appliance fitting difficult, but this can usually be managed with the incorporation of a suitable colostomy appliance in a well-designed support corset.

Rehabilitation of the colostomy patient

Rehabilitation is an essential part of patient management. It is accepted that the man involved in an industrial accident or the soldier wounded on active duty needs medical, psychological, and social care.
to enable him to resume his independent role in society. Similarly the surgeon who operates and makes a colostomy must ensure that the patient is sent back into a satisfactory environment as a grateful and independent person. Rehabilitation means the returning, after the lapse of time, of a person to his previous role and privileges in society in a proper condition to enjoy this role and privileges. The first steps in the rehabilitation of the colostomy patient must be taken preoperatively. Most patients are horrified by the thought of a colostomy; a permanent colostomy often implies cancer and all that dread diagnosis connotes—it conjures up for the patient a poor life expectancy and appliances, apparatus, faecal smells, social limitations, and 'being caught unawares' at the most embarrassing times. All these are legitimate fears for any patient, but the more fastidious the patient the greater the horror. The patient who is to have a temporary colostomy will have to be told this before operation if possible. He can be told that the colostomy will be there for some weeks or months and will then be closed; this gives him something to look forward to and greatly eases the emotional burden he has to bear.

Preoperative counselling of the patient is best initiated by the surgeon who is to undertake the operation. This discussion must be open and sympathetic and above all encouraging. Unless the patient is given hope he will not readily undergo a radical mutilating operation. An experienced nurse should participate in this preoperative counselling. She should preferably be the nurse who will attend the patient after the operation; she may be the ward nurse or a specialized 'stoma therapist' trained in the management of ileostomy and colostomy patients. There is great value often in introducing the patient before operation to another person who has had the operation and is well adjusted to the 'colostomy life'. Such a person must be temperamentally and socially suitable and able to relate easily to the preoperative patient under consideration.

Management of a colostomy

In this country the most commonly advocated method of colostomy control is 'natural evacuation'\(^{20, 27-29}\). This means that by judicious dietary restrictions, controlled fluid intake, and the use of medications the colostomy may come to act once or twice daily at predictable times. An alternative to 'natural evacuation' is colostomy irrigation, which is advocated by some surgeons in this country and most surgeons in America\(^{30}\). The natural evacuation method involves care in using appliances, care of diet, and the use of medicaments.

Appliances. There are two main varieties of appliance\(^{31}\). First, those which incorporate a bag in which the faeces are collected; these bags may be stuck by an adhesive plaster round the stoma or they may be

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held in place by a belt. Second, there are appliances which consist of a belt made of elastic webbing or Aertex material and are designed to hold a dressing over the colostomy stoma.

In the initial postoperative period adhesive appliances are generally preferred and should be used until the patient can turn his attention to diet and medicaments and regulate his colostomy action. In the longer term the ideal should be a non-adherent dressing. A very nervous patient who fails to achieve good control of his bowel action may continue to use a non-adherent appliance with a bag.

Diet. A colostomy patient should be able to eat an almost normal diet: foods, particularly fruit and vegetables, do affect the bulk and fluidity of the colostomy actions, but with care the patient should learn to accommodate to these alterations. Having stated this counsel of perfection, it is advisable to look at colostomy patients and ascertain whether or not they do restrict their diets and why they do this.

My colleagues and I reviewed 83 patients with established permanent colostomies and compared them with a control group who had had restorative surgery for rectal cancer. We found that only 47% of colostomy patients ate a ‘normal’ diet compared with 74% of the control group. All the colostomy patients carefully avoided onions in any form—in fact, the one certain piece of advice about diet that can be given to any colostomy patient is ‘avoid onions’. Other foods that cause considerable distress to colostomists are salad and beer.

The individual patient’s reaction to dietary restriction cannot be predicted; some patients are most careful about diet, avoiding some foods and restricting quantities of other foods most carefully; other patients enjoy eating and accept an over-active colostomy as a fair price for an enjoyable meal.

A colostomy is not the only factor influencing dietary restriction; social class is also important. Thirty-one per cent of both the non-manual classes compared with 54% of the manual classes ate a diet restricted by three or more items. In advising patients about diet, care must be taken to pay due regard to the economic aspects of the advice and to the constraints imposed by social class on some patients.

Medication. Drugs may be used to constipate the patient and thus to regulate the colostomy. The two most useful preparations are codeine phosphate and mixture of kaolin and morphine, B.N.F. It is well to let new colostomy patients experiment with these drugs; if the patient is intelligent he can often balance the side-effects of excess vegetable intake by careful medication with either of these drugs. Mixture of kaolin and morphine is a most useful standby drug, and every colostomy
patient should have some available to alleviate the occasional catastrophic bout of gastroenteritis.

Methyl cellulose preparations, such as Celevac and Isogel, are most useful in the long-term management of permanent colostomies. These preparations absorb water and make the stools more bulky and better formed. The ideal stool for a colostomy patient is a hard, constipated one; if the patient can have only one hard, constipated stool each day he has achieved absolute success in 'natural' colostomy management. Careful regulation of diet and the use of constipating drugs and cellulose preparations usually helps to this control.

Apart from drugs given to control a colostomy, there are other drugs which have side-effects on the bowel. Two groups of drugs which are in common use deserve special mention. These are the oral antibiotics and the tricyclic antidepressants.

The oral antibiotics, by altering the bowel flora, can lead to diarrhoea. An attack of diarrhoea can be disastrous for a patient with a colostomy; not only is there the problem of collection of the fluid excreta, but there is also the havoc that fluid faeces can wreak on the skin around the stoma. Colostomy patients should be told about the dangers of antibiotics and doctors must be aware of the problem before they prescribe antibiotics for these patients.

The tricyclic antidepressants have a powerful anticholinergic action on the intestine. This anticholinergic action can lead to gross constipation and faecal impaction if the drugs are used in high dosage for too long. Tricyclic antidepressants are useful in depressed colostomy patients and if given carefully they can control both the severity of the depressive illness and the frequency of bowel action. I very frequently give postoperative patients tablets of amitriptyline, 10 mg in the morning, 10 mg at lunchtime, and 30 mg at night.

Care of the skin. The skin around a colostomy stoma should not ordinarily be at risk, unlike the skin around an ileostomy. Skin soreness or dermatitis may be due to either of two causes—the effect of faecal contamination on the skin, or allergy to an appliance or an adhesive—'contact dermatitis'.

The effects of faecal contamination can be overcome by adjusting the diet and making the stools more formed, by careful and frequent cleansing of the skin with soap and water so that continuous contamination does not occur, and by using an appliance incorporating a bag to keep fluid faeces away from the skin during bouts of diarrhoea.

Allergy to an appliance or adhesive is usually easily detected because it is well defined to the area of contact of the allergen. Discontinuation of the substance causing the allergy usually relieves this skin complication immediately.
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For most skin complications the most useful and locally soothing application is karaya gum, either as a washer around the stoma or as a powder or gel. Karaya gum is the sap of the bark of the karaya tree; it is the most useful substance yet introduced for stoma skin care and so far there are no reports of sensitivity to it developing.

Management by irrigation. Management by irrigation is a popular method of management in North America. To irrigate a colostomy a soft rubber catheter is passed some 10 cm up the colon from the stoma and the bowel is then washed out with about a litre of tepid water introduced by either a rubber syringe or under gravity from a bottle. To irrigate the bowel the patient sits on a commode, allows the water to flow into the colon, and then allows the faecal fluid to flow out through a plastic flange and tube into the commode. To irrigate the bowel adequately takes about 45 minutes to an hour a day; irrigation needs to be done at least every other day.

Irrigation is a time-consuming and complicated procedure and there is a danger of perforating the bowel with the irrigating catheter if care is not taken. Many patients find it a disagreeable activity, and for these reasons the irrigation management is not popular in Britain.

The colostomy life

Much has been written about the colostomy management which is so vital to the successful rehabilitation of the colostomy patient. In 1957 and 1958 editorials in the British Medical Journal asked the question, ‘How do these people fare?’ There have been numerous articles by doctors and nurses who write authoritatively about the ‘normal full life’ free of social embarrassment to which the new colostomy patient can look forward. However, despite all these articles there seems to be a paucity of reliable data on which to base these assertions. A cross-cultural study of 50 colostomy patients in the U.S.A., Canada, and England to evaluate colostomy management without irrigation indicated that a good irrigation technique gave the best results, though natural evacuation might be a useful alternative where physical considerations preclude successful irrigation. Dietary restrictions were found to have little influence on colostomy activity.

In Britain Lockhart-Mummery has drawn attention to the difficulties of colostomy control, especially for those in the ‘poorer classes’. He found that they had ‘few facilities for keeping themselves clean’ and usually had no control over the discharge from the colostomy. The ‘better class’ patients, he found, took more trouble, and very good control was usually obtained. Dukes, in 1947, undertook a survey of 100 colostomy patients of ‘the hospital class’. He concluded that many patients ‘keep in good health, lead useful lives, and seem little handi-
capped by the colostomy'27. Daily irrigations were found to be unnecessary as most patients trained their colostomies to work two or three times daily with the help of dietary restriction. In 1971 my colleagues and I reviewed 78 patients who were using natural evacuation and dietary control as a method of colostomy management. We found that 27 of the patients (36%) were quite unable to control their colostomies and some of them had continuous diarrhoea32, 40.

Dietary control, supplemented by judicious medication, can be a most successful form of colostomy management, but it needs continuous attention to detail if it is to prove satisfactory. It is a most important and time-consuming part of the rehabilitation of the colostomy patient to teach him about control, and success in the management of the colostomy is often the key to all else in the effective outcome for the patient.

Despite the most careful preoperative counselling, postoperative emotional problems and even severe psychiatric disorders are common. Studies30, 41-44 have indicated that about 25% of patients with colostomies suffer from ongoing depressive illnesses, and suicide among these patients is not uncommon. The manifestations of these psychiatric disorders are numerous and include fetishism and ritualism about the colostomy, colostomy rejection, ideas of freakishness and complaints of a changed body image35, 45, psychosexual disorders, dietary ritualism, and so on. It is important to interview colostomists adequately in follow-up clinics in order to discover these symptoms and to treat the underlying neurosis; failure to do this may unnecessarily render the patient a psychiatric cripple. A high incidence of depression has been found in areas of general disability, and more work is needed to establish the incidence of depression and its specificity in colostomy patients46.

Patients who have permanent colostomies associated with a radical excision of the rectum for cancer often also have disabilities due to the original rectal surgery. These include disorders of urination due to damage to the pelvic nerve supply and, in men, disorders of sexual function, impotence, and failure of ejaculation41, 44, 47-49. These disorders can often compound the problems of colostomy management, and indeed severe sexual problems which have remained unexplained to a man and his spouse may be a cause of marital breakdown. A colostomy is not a barrier to sexual activity or child-bearing in women; the excisional surgery for cancer of the rectum may damage the vagina and make intercourse difficult, but successful conception should be followed by straightforward pregnancy. Fortunately most female patients who have rectal cancer are post-menopausal and so we do not have a vast experience in the management of pregnancy in female colostomists.

Social problems loom large in the catalogue of woes of colostomists, and attention should be given to rehousing these persons, to organizing
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their work, and to overcoming their reluctance to indulge in many forms of social activity. Indeed, these patients frequently become isolated in the community, and when this isolation is measured using an index of social isolation it has been found that 51% of elderly colostomy patients are 'isolated' compared with 10% in the community at large.

Nowadays in Britain there is a comprehensive health and social security system to attend to the rehabilitation of colostomists. However, all too often these services are inadequately used, few colostomy patients seem to be registered under the Disabled Persons Act, and even fewer surgeons seem to realize that social services and the Disabled Persons Act do exist.

Before concluding I wish to draw attention to two encouraging developments in the rehabilitation of stoma patients. The first is the development of a first-class voluntary agency, the Colostomy Welfare Group, who seek to attend to the non-medical areas of rehabilitation. The second is the recent decision to train specialist nurses in stoma care to work in district general hospitals. The advent of these specialist nurses coupled with the proposed fusion of hospital and community health provision in 1974 should go a long way to ease the undoubted burden of the patient with a permanent colostomy.

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University of Sheffield
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The London Hospital
The Royal Free Hospital
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GUY’S Hospital
Welsh National School of Medicine
Cade Professor of Surgery to the R.A.F.
The London Hospital
Royal Army Military College
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Approved for study leave under HM 67(27)

Applications and further details from: The Secretary, The Medical Education Centre, Whips Cross Hospital, London E11 1NR. Telephone: 01-539 5522 Ext 310.
Closing date for applications: JULY 1973

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