

OSTOMY AND OSTOMY PATIENTS.

Predisposing diseases

These are some of the conditions, which may require stoma formation.
The ratio of colostomy to ileostomy operations is greater than 5 to 1.

Colostomy

- ❖ Carcinoma
- ❖ Diverticular disease
- ❖ Obstruction
- ❖ Chron's disease
- ❖ Irradiation damage
- ❖ Bowel ischaemia
- ❖ Faecal incontinence
- ❖ Trauma
- ❖ Congenital abnormalities such as Imperforated anus and Hirschsprung's disease

Ileostomy

- ❖ Chron's disease
- ❖ Ulcerative colitis
- ❖ Familial polyposis coli
- ❖ Obstructuion
- ❖ Irradiation damage
- ❖ Trauma
- ❖ Meconium ileus
- ❖ Carcinoma

Urostomy

- ❖ Carcinoma
- ❖ Disorders of the spinal column
- ❖ Urinary incontinence

Colostomy: the most common indication for a permanent colostomy is colorectal cancer. Complications of diverticular disease are the most common indication for a temporary colostomy.

Ileostomy: ulcerative colitis (the most common), Chron's disease and familial polyposis are some of the conditions that may require a permanent ileostomy.

Urostomy: the main indication is pelvic malignancy, particularly carcinoma of the bladder.

Basic Principles of Stoma Surgery

Certain principles are common to all stoma surgery. For example, the gut must not be put under undue tension in bringing the stoma to the surface, and an adequate blood supply must be maintained. Laparotomy incisions should always be positioned well away from potential stoma sites, and the body contours of the patient taken into account when deciding on the stoma site.

The surgical technique employed depends on the type of stoma created. These are the most common ones.

Temporary loop colostomy

A temporary loop colostomy is fashioned in order to allow healing of a diseased or injured rectum or anus, to protect an anastomosis in a distal portion of the gut, or to relieve a distal obstruction. Because the colon is the region of the gut which reabsorbs much of the fluid ingested or secreted into digesting food, a loop colostomy in the sigmoid region produces more solid faeces. However this type of stoma is more often made in the most mobile region of the transverse colon, because it can readily be brought to the body surface and allows mobilisation of a longer length of colon for restoration of gut continuity at later surgery.

In order to make the loop colostomy, a loop of the colon is brought to the surface of the body through a small incision (5cm) and supported on a short rod until healing and fixation occur. Removable plastic rods are often used; these are removed approximately within 10 days. The cut bowel wall is usually sutured to the skin edge. A temporary colostomy can usually be closed after 6 – 8 weeks but this depends on the surgeon and each case is different.

Temporary loop ileostomy

A loop ileostomy allows 'resting' of the whole colon. A loop ileostomy is used to protect ileorectal and ileoanal anastomoses, for example following operations for colon diverticular disease or acute Crohn's disease of the rectum and anus, and allows healing of distal excisions and lesions (eg fistulas). More recently it has been used to protect newly formed pelvic 'pouches' after colectomy for ulcerative colitis.

To make the loop ileostomy, a loop of ileum is brought to the surface of the body and supported on rubber tubing or a short rod. After the ileum has been cut round two thirds of its circumference on one side of the loop, a spout can be formed from the longer arm of the loop.

Terminal colostomy

A terminal colostomy is the most common permanent stoma and is usually made to treat rectal or anal carcinoma, or less commonly following irreparable injury to the rectum (when low resection of the bowel and anastomosis are not possible)

When the rectum is involved in the disease process it will be removed; the colon is then mobilized, and the cut end brought to the abdominal surface at an opening approximately 2cm in diameter, and usually sited in the left iliac fossa. The mucous surface of the colon is sutured to the skin. If the rectum is free of disease it will be left in situ' so that bowel continuity may be surgically restored later. The distal bowel in this case may be oversewn and returned to the abdominal cavity, or alternatively brought out to the abdominal wall as a mucous fistula.

Terminal ileostomy

A terminal ileostomy is made when the entire colon needs to be removed, and this occurs most often in inflammatory bowel disease, but may also be necessary in familial polyposis coli and very occasionally in cases of colorectal cancer.

The ileostomy is sited in the lower right iliac fossa. The ileum is usually divided about 2cm in front of its junction to the caecum. The ileum is then brought out through a 2cm incision in the rectus muscle to a length of about 6 – 7 cm. It is sutured to the abdominal wall to prevent it retracting, and then turned inside out (everted), to form a spout of 2 –3 cm in length. This spout is necessary to keep the extremely irritant ileal fluid off the sensitive skin.

Urostomy

Urostomies are usually performed when a cancerous bladder has to be removed. The most common technique is the formation of an ileal conduit. In this operation a 10 – 20 cm length of ileum is isolated with its blood supply, and the ends of the ileum anastomosed to restore continuity of the bowel. The ureters are mobilized with or without a section of bladder and anastomosed into the isolated ileum, the other end of which is used to form a stoma. The flow of urine is diverted out through the urostomy.

Preoperative patient preparation

Good stoma management involves many aspects of care. Ideally it should begin before the operation, a well informed, reassuring preoperative preparation of a prospective stoma patient and his relatives will greatly aid the recovery and rehabilitation of the patient. If there is a specialist stoma care nurse in post, it is important that she will be involved in management of the patient from the outset. Any patient about to undergo surgery, which may result in a stoma, will need careful preoperative preparation, whether the stoma is temporary or permanent. In an emergency situation, of course, comprehensive preoperative preparation may not be possible. Preoperative preparation of a patient for stoma surgery can be divided into two broad categories;

- ❖ Psychological preparation
- ❖ Physical preparation

Psychological preparation.

The process of psychological preparation is to begin by the stoma care nurse, preferably in an outpatient's clinic, and will be continued and reinforced by the stoma care nurse and ward nurses in hospital. (Note: the limitations are that not all patients are referred pre op to the stoma care nurse)

Patients who have received appropriate and adequate psychological preparation recover more quickly from surgery than those who have not. The nurse should start by assessing the 'whole person', taking into account physical, mental and social factors, and attempting to determine the requirements of the patient in each of these areas. The postoperative nursing plan should be outlined, describing the treatment and training the patient will

receive in hospital to prepare him for his return to the normal life at home. After admission, the ward nurse is well placed to assess the patient's overall physical or mental limitations and to help in planning the delivery of a full care programme. Ward nurses should be prepared to discuss the patient's needs with the stoma care nurse, the surgeon and his team, and with other nursing staff.

Explaining surgery: although a member of the medical staff will have talked to the patient about his coming operation, some of this information may not have been assimilated – it may have to be repeated several times. The nurse must be well informed, ready to answer the patient's questions openly and honestly, and prepared to correct any misunderstandings or misconceptions. If in doubt, the nurse should seek help or refer the patient to more skilled personnel. Most people want to know how the operation will affect them and how they will feel after surgery, few would want all the details of the operative techniques. It is interesting, however, that most stoma patients wish they have been told more about the operation before it happened, though in fact many will have been advised but failed to register the information.

Counselling: the stoma care nurse is uniquely situated to assist and teach the patient and his family and must be prepared to offer herself as a 'counsellor'. She will help the patient to express and discuss his inner feelings, which may include.

- ❖ Problems of self image
- ❖ Family relationships
- ❖ Sexual problems or fears
- ❖ Denial of his/her condition
- ❖ Anger, depression
- ❖ Suicidal thoughts
- ❖ Fear of death

The goal of counselling is for the patient to accept his condition and be determined to 'get back to normal' after the operation – this may take months or even years.

If the patient's wishes it, contacting the stoma care nurse's own patients can prove very useful. Emotional and mental support, particularly in the early stages of caring, are vital for a successful outcome.

Physical preparation

Stoma siting: correct siting of a stoma greatly influences its management and function. The stoma must be sited patient can see it for routine management – a stoma on the underside of a middle age paunch will be difficult for the patient to deal with. Poor eyesight and other physical disabilities (e.g. arthritis of the hands, missing fingers) must be taken into account when siting the stoma and planning care. It must also be positioned so that adequate adhesion of the appliance can be obtained.

The site is best marked preoperatively, using an indelible marker pen, with the patient lying, sitting and standing. It is important to check that the site will not interfere with clothing. Fitting an appliance may be necessary to check the position of ‘problem sitings. It can be a very useful check for the patient to wear an appliance before the operation, but only if he/she is psychologically ready to accept this part of the preparation process.

Sites to avoid when positioning a stoma:

- ❖ Old scars
- ❖ Bony prominences
- ❖ The umbilicus
- ❖ Groin creases
- ❖ Pubic areas
- ❖ The waistline
- ❖ Fatty bulges or creases (lying, sitting. Standing) underneath large breasts
- ❖ Areas affected by skin disorders e.g. psoriasis
- ❖ The site of the proposed surgical incision
- ❖ A site which cannot be seen by the patient.

Bowel preparation: Bowel preparation should be carried out in accordance with locally accepted practices. The method used is at the discretion of the surgeon and may vary from ward to another.

Aims: To prevent damage to the bowel anastomosis by faeces
To avoid contamination of the operative site by faecal soiling.
To prevent postoperative impaction of bowel contents.

Postoperative Care

Appearance and function of the stoma

In addition to the routine postoperative observation of vital signs and fluid balance, early postoperative care includes careful observation and monitoring of the stoma, which must be inspected regularly for signs of ischaemia or necrosis; a transparent appliance is thus necessary. A healthy stoma should be red, with a good blood supply, though it may be initially be somewhat oedematous. When the stoma appliance is being changed, and after the stoma has been gently and carefully cleaned with warm water, its condition should be noted. If the appliance is too tight, necrosis will be seen which can result in scarring of the stoma. Conversely if the appliance is too big, the skin surrounding the stoma will be at risk from the effluent, resulting in soreness. The size and colour of the stoma, and any abnormalities should be noted.

The time when the stoma first acts, and the type, appearance, quantity and consistency of material passed should be recorded. First passage of flatus should also be recorded. This information is important because it indicates, that peristalsis has restarted. The patient may have had a nasogastric tube inserted, and he/she should be reassured that this is only a temporary measure, to keep the stomach empty until peristalsis is working again.

Physiological changes following stoma surgery

The stoma patient's body must make a number of physiological adjustment to the loss of part of the gut. In particular, the ileostomist has lost the major salt and water reabsorbing organ of the body and is at risk of profound disturbances in body water and electrolyte balance. Such patients initially lose more than 500mls extra of fluid each day. Although the body can compensate to some extent for loss of the colon by increasing the transit time of food within the small intestine, by an increase in its absorptive area and by changes in enzyme activities, the ileostomist tends to lose more sodium, magnesium, calcium and water than normal, but retains more potassium and fat.

Particular problems arise in the immediate postoperative period, and this is the time when the new stoma patient's electrolyte balance must be carefully monitored and corrected if necessary. Accurate measurements and recording of fluid intake and output are essential. The main problems are sodium loss and dehydration, which are aggravated by sweating in hot weather.

Fitting and changing the appliance

A transparent drainable bag is supposed to be fitted in the operating theatre. This allows observation of the stoma and effluent, and drainage of the effluent, with minimal disturbance to the patient. Until stoma function settles down, the effluent may be fluid and large in volume (up to 2-3 litres from an ileostomy) and must be easily and regularly drained to reduce pressure on the bag and ensure patient's comfort.

The opening in the stoma appliance should be sufficiently large to allow for initial swelling and oedema. Protective materials that fit snugly around the stoma should be used and the appliance should be easy to fit. The bag must be fitted firmly so that it stays in place for a few days, but it must not be too tight, or it may delay healing or lead to separation of the stoma from the skin edge. A well fitted leak proof and odour resistant appliance at this early age does much to promote patient confidence. In the early postoperative period when the effluent is fluid, the bag is important to be of a drainable type, with an easily manageable clip. At this time also, the stoma may reduce in size or change shape, and it is important that the appliance size is adjusted if this occurs.

During the postoperative recovery period, the stoma care nurse and ward nurse must train and assist the patient in the care of his stoma. The nurse should always discuss her intentions and actions with the patient, who should be encouraged to ask questions. The ward nurse should attend the patient with the stoma care nurse, who will train her in stoma management as she assists the patient.

Skin problems

Skin care is very important as the effluent from a stoma (particularly an ileostomy) may damage unprotected skin, so at every change of appliance it must be cleaned, dried and protected. Warm water is usually sufficient, but if soap is used it must be unperfumed. Soap may increase the patient's sensation of cleanliness; if it is used it must be rinsed off well as it tends to dry the skin.

Improvements in appliance adhesives have greatly reduced skin problems, but an allergic reaction very occasionally occurs. Any change in skin condition must be noted,

Other postoperative problems.

Although improved surgical procedures are reducing its occurrence, parastomal hernias is the most common complication, occurring in 20% of colostomists, and is usually due to the stoma being sited outside the rectus muscle. Although most hernias are not life threatening, they can have serious psychological effects; patients should be referred to the surgeon. Other stoma problems include bleeding, obstruction, retraction and prolapse; the last is common with a transverse colostomy, not uncommon with an ileostomy, but seldom happens with a terminal colostomy.

Appliances

There are two basic classes of appliances – one piece and two piece (the most usually used in our country)

One piece appliances consists of a collecting bag, with a circular seal which should fit neatly, but not too tightly, around the stoma, and an outer adhesive ring which should attach the appliance securely to the skin. The complete appliance is discarded after use and replaced with a new one. Drainable appliances are changed every few days.

Two piece appliances consists of an adhesive base plate fixed around the stoma to which a disposable collection bag is fitted. After use the bag is removed, discarded and replaced with a new one. The base plate can stay in place for more than one day.

Drainable bags have an open end with an emptying device to drain the contents. They are normally used for watery faeces during the immediate postoperative period. They are always used for ileostomists, because output from an ileostomy is very fluid and drainable bags offer a practical long-term option.

Closed bags have no opening other than that, which fits around the stoma. They are used when the patient's faeces are reasonably well formed, so most colostomists choose to wear this type of appliance. Closed bags are discarded after use.

Urostomy appliances are fitted with a drainage tap and an anti-reflux valve, which prevents reflux of urine over the stoma when the patient is lying down.

The stoma patient in hospital has the full support of the care team, during this time it is important to prepare him for life at home, where support may be less readily available. However, it is likely that only some of the information provided in hospital will be remembered, and follow-up visits by community nurses are important.

Patients should be well and motivated to return home. The first few weeks of having to cope with the day-to-day problems of a stoma at home can be very taxing, and there is a high risk of rebound depression. Family support, when available, is invaluable, and the stoma care nurse and/or community nurse monitor the patient carefully.

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