- Antidepressants, anticholinergics might cause constipation. So these drugs should be taken carefully.
- Using irritant solutions near stoma should be avoided. It may lead to dangerous complications.
- Patient can have normal sexual activity.
- Patient should have additional stoma bags in hand so as to use if required urgently.
- Patient should be aware of different appliances available and should be well versed with its use. He can take the help of the stoma societies.

ILEOSTOMY

It is indicated when large bowel is entirely diseased or removed with an unprepared bowel where anastomosis cannot be undertaken like Crohn's disease, malignancy, large bowel fistulas, gangrene or perforation of colon.

Ileostomy is sited at right iliac fossa in the middle of the spinoumbilical line.Ileum carries unformed liquid stool and so leak, skin changes and requirement of more bags is common.

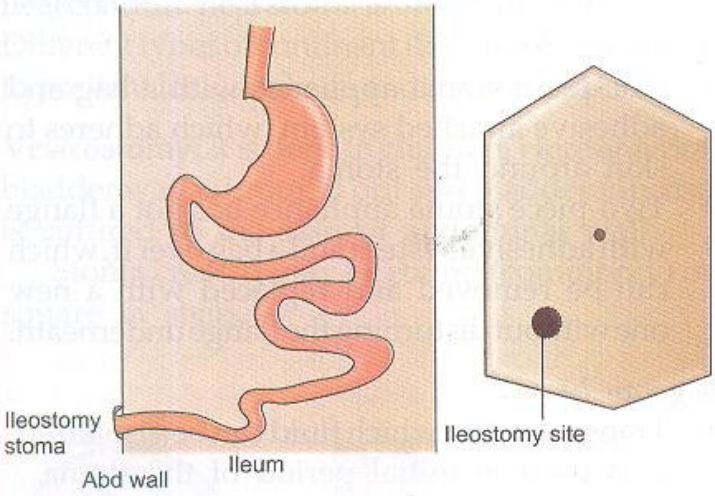


Fig. 7.22: Picture of ileostomy stoma site.

ILEAL URINARY CONDUIT

- Isolated ileal loop is used as stoma. Ureters are implanted to this ileal loop. Through this ileal stoma in right iliac fossa in the middle of spino-umbilical line, urine is drained as diversion. Often continent ileal conduits are used.
- It is indicated when permanent urinary diversion is required like carcinoma urinary bladder, pelvic malignancies where both ureters are involved.
- Initially after procedure, a Foley's catheter is passed into the stoma for seven days and later a nonreturn valved stoma appliance is used.

Specific Complications

- Stomal obstruction and urine block.
- Phosphate deposition and encrustation causing stomal infection and block.
- Urinary tract infection often can be severe leading to septicaemia.

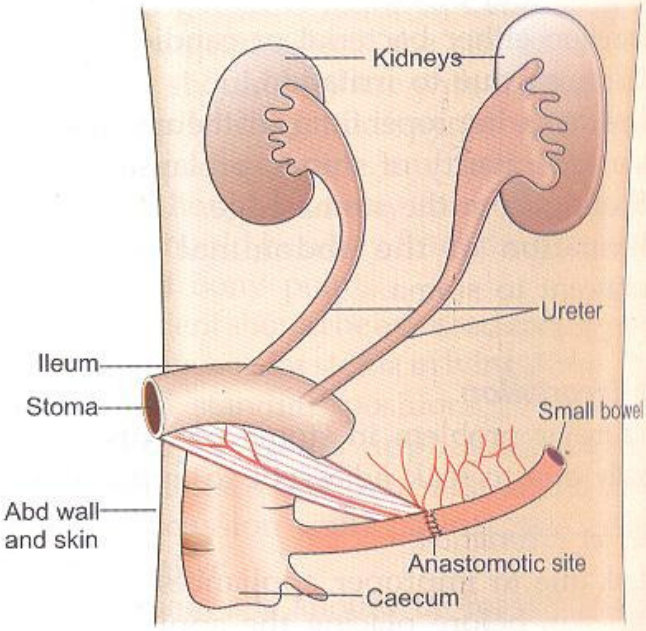


Fig. 7.23: Ileal urinary conduit as urinary diversion

CAECOSTOMY

- Caecostomy is placing a tube in to the caecum for temporary drainage of the contents.
- It is done in acute conditions of the colon (as colon is not prepared) like perforation, obstruction, and gangrene.
- It is usually of valvular type and drainage is dependent. Wash with an irrigating fluid can be given. Once tube is removed closure is spontaneous. As the tube is not wide, blockage and inefficient drainage is the problem.

is technically easier and better accepted
y the patient.
ermanent caecostomy is not done.
Other management is like in other stoma care.

LOSTOMY

an artificial opening made in the colon to exterior (skin) to divert faeces and flatus.

es

Temporary: Is done in conditions wherein diversion is required to facilitate healing distally in the rectum or distal colon. And is is closed once the purpose is over.

- Site of temporary colostomy is usually right hypochondrium and left iliac fossa.
- It can be *loop colostomy or Devine's double-barrel colostomy* (wherein there is a gap between the two openings of colostomy which prevents spillage into the distal loop).

Permanent colostomy is always *end colostomy* placed in left iliac fossa—6 cm above and medial to the anterior superior iliac spine.

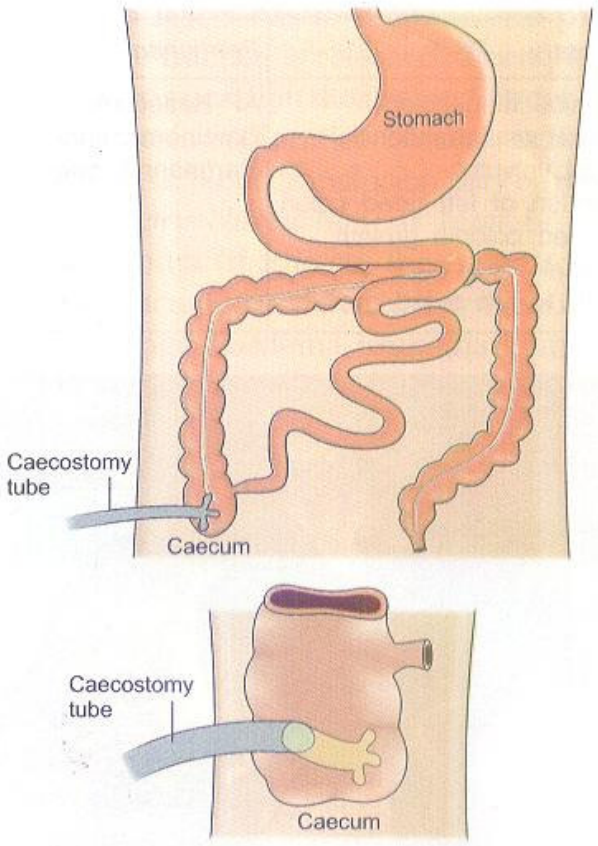
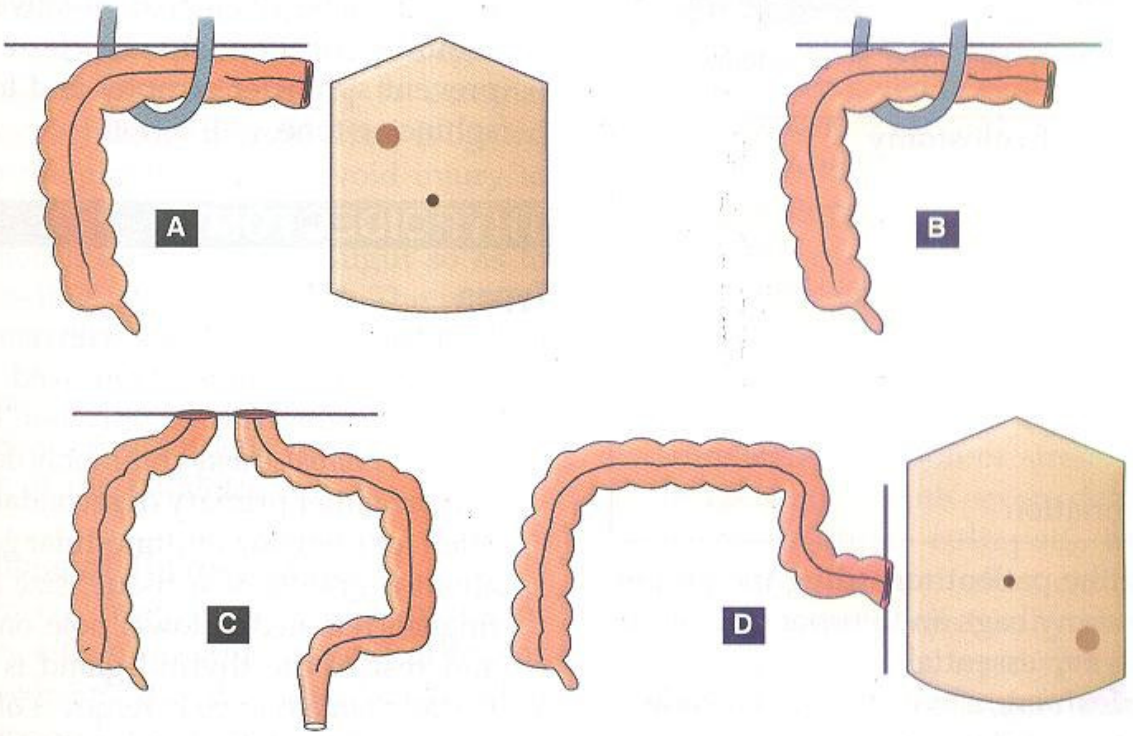


Fig. 7.24: Caecostomy placement with caecostomy tube *in situ.*



Figs 7.25A to D: Types of Colostomy (A) Temporary colostomy site, (B) Loop colostomy—appearance, (C) Devine's double barrel colostomy, (D) Permanent end colostomy.

Indications

Temporary	*Permanent*
Congenital megacolon Anorectal malformations Sigmoid volvulus Perforation of left-sided colon Left sided colonic growth High anal fistula Trauma to left sided growth	AP-Resection Carcinoma anal canal Hartmann's operation

Fig. 7.26: Colostomy bag fixed at colostomy site.

Complications of colostomy

1. Prolapse of mucosa
2. Retraction
3. Necrosis
4. Stenosis
5. Herniation
6. Bleeding
7. Diarrhoea
8. Enteritis
9. Skin excoriation

Educating the patient regarding the proper usage of colostomy bags and proper care of the colostomy is very essential.

- ***In Loop colostomy***, a loop of colon is brought to the surface of the skin (abdominal wall) with a thin glass rod or tube passed through the mesocolon.
- ***In defunctioning colostomy***, loop is brought out and proximal and distal ends are separated completely so as to give complete rest to the distal part.
- ***Terminal colostomy*** is an end colostomy and is always a permanent one. End of the remained colon is sutured to the skin usually in left iliac fossa.

Colostomy Care

- Similar to stoma care.
- Initially stoma bag should be transparent as content is liquid stool but later it can be opaque.
- Regular consultation with stoma therapist.
- Care of the skin.
- Training for managing colostomy, its care to prevent leak, odor, and discomfort.

Closure of Colostomy

- When temporary colostomy is done, it is closed usually after 3 months. Closure of colostomy is done after proper bowel preparation, under general anaesthesia.
- Proper postoperative care is important. Enema should not be given postoperatively. Patient should perform anal sphincter exercises to prevent sphincter atrophy and to maintain sphincter tone.

THYROIDECTOMY

Types

1. *Hemithyroidectomy:* Along with removal of one lobe, entire isthmus is removed. It is done in benign diseases of only one lobe.
2. *Subtotal thyroidectomy* commonly done in toxic thyroid either primary or secondary and also often for nontoxic multinodular goitre. Here about 8 grams, or a tissue, size of pulp of finger is retained on lower pole, on both sides and rest of the thyroid gland is removed.
3. *Partial thyroidectomy* is removal of the gland in front of trachea after mobilization. It was earlier done in nontoxic multinodular goitre. Now subtotal thyroidectomy is *preferred.*

Near total thyroidectomy: Here both lobes except the lower pole which is very close to recurrent laryngeal nerve and parathyroid is removed. It is done in case of papillary carcinoma of thyroid.

Total thyroidectomy: Entire gland is removed. It is done in case of follicular carcinoma of thyroid, medullary carcinoma of thyroid.

cedure

ition: Under general anaesthesia patient is in supine position with neck extended by cing a sand bag under shoulder—with e tilt of 15° head up to reduce venous gestion.

sion: Horizontal crease incision is done, two ger breadth above the sternal notch, from one nomastoid to the other.

and platysma are incised—upper flap raised to thyroid cartilage, lower flap up to sterno-icular joint. Deep fascia is opened vertically he midline. Strap muscles are retracted or in between two Kocher's forceps. Pretracheal ia is opened to mobilise the thyroid. First, rt stout middle thyroid vein is ligated, and n superior thyroid pedicle is ligated close to gland so as to avoid injury to external ngeal nerve. Inferior thyroid artery is ligated ay from the gland so as to avoid injury to urrent laryngeal nerve. Mobilised gland is moved. Bed is sutured with catgut so as to vent bleeding. Drain is placed. The wound lose in layers.

roid steal: Patient is taken to operation theatre few days before doing surgery so as to reduce anxiety of the patient.

mplications of Thyroidectomy

Haemorrhage: May be due to slipping of ligatures either superior thyroid artery or other pedicles. It will cause tachycardia, hypotension, breathlessness, and compression over the trachea may cause severe stridor, respiratory obstruction. As a first aid, immediate release of sutures including that of deep fascia has to be done and pressure over the trachea is released. Then patient is shifted to operation theatre, and under general anaesthesia exploration is done and bleeders are ligated. Blood transfusion may be required.

2. *Respiratory obstruction:* It may be due to haematoma (if it is so, the haematoma has to be evacuated), or due to laryngeal oedema. For laryngeal oedema, immediate emergency endotracheal intubation is done along with steroid injections. Often emergency tracheostomy may be required as a life saving procedure.
3. *Recurrent laryngeal nerve palsy:* It can be transient or permanent. Transient is 3% common. They usually recover in 3 weeks to 3 months. Often they require steroid supplement and speech therapy. Permanent paralysis is rare.
4. Hypoparathyroidism is rare 0.5% common. Mostly it is temporary due to vascular spasm of parathyroid glands, occurs in 2-5th postoperative day. Present with weakness, +ve Chvostek's sign, carpopedal spasm, convulsions. Serum calcium estimation has to done and then 10 ml of 10% Calcium gluconate is given IV eighth hourly, and later supplemented by oral calcium 500 mg 8th hourly. After 3-6 weeks, patient is admitted, drug is stopped and serum calcium level is repeated.
5. Thyrotoxic crisis (Thyroid storm): occurs in a thyrotoxic patient inadequately prepared for thyroidectomy and rarely a thyrotoxic patient presents in a crisis following an unrelated operation or stress. They present in 12-24 hours with severe dehydration due to circulatory collapse, hypotension, hyperpyrexia, and often cardiac failure.

   Treatment is injection hydrocortisone, oral antithyroid drugs, tepid sponging of whole body, beta blocker injection, oral iodides, large amount of IV fluids for rehydration, digitoxin, cardiac monitor, often ventilator support, and observation. It has got high mortality rate