VENOUS CUT DOWN

INDICATIONS:

1. When patient is in circulatory collapse
2. Dehydrated state & all the peripheral veins are in the collapsed state
3. Extensive burns where other peripheral veins are inaccessible

ANAESTHESIA: Local anaesthesia

POSITION: Supine

VEINS USED:

1. Great saphenous vein
2. Basilic vein

OPERATIVE STEPS:

1. The leg painted & draped.
2. A 2 cm transverse incision is made 1 inch above & anterior to medial malleolus.
3. Using artery forceps subcutaneous tissues are separated and great saphenous vein is identified
4. Vein is stabilized by placing the stem of artery forceps under it.
5. The anterior wall of the vein is cut transversely.
6. An intravenous catheter is introduced into the vein and fixed using silk.
7. The lower end of the vein is ligated
8. After hemostasis wound closed in layers, dressing applied.
9. Intravenous catheter connected to I.V set and fluid infused.

TOTAL THYROIDECTOMY

INDICATIONS:

1. **Carcinoma thyroid – papillary, follicular & medullary**

ANAESTHESIA:

General anesthesia

POSITION:

Supine with neck extended

INCISION:

Kocher's thyroid incision

OPERATIVE STEPS:

1. Under ETGA patient in supine position, neck extended by placing a sand bag under the shoulder and table raised to 15 degree in the head end.
2. Horizontal skin crease incision made 2 finger breadth above sternal notch, extending from one sternocleidomastoid to the other (Kocher's thyroid incision).
3. Platysma incised slightly at a higher level.
4. Upper flap raised upto thyroid cartilage & lower flap raised upto sternoclavicular joint.
5. Investing layer of deep cervical fascia opened vertically & strap muscles are retracted. (In some cases if required they are divided).
6. Pre-tracheal fascia opened & gland is reached.
7. Middle thyroid vein ligated in continuity & divided.
8. Superior pedicle ligated close to the gland (to avoid injury to the external laryngeal nerve)
9. Inferior pedicle ligated away from the gland (to avoid injury to the recurrent laryngeal nerve)
10. Similarly superior and inferior pedicles are ligated on the opposite side.
11. The gland is dissected by combined sharp & blunt dissection and the whole gland is removed in toto with the capsule
12. Hemostasis obtained, drain placed & wound closed in layers.

HEMITHYROIDECTOMY

1. Indications: solitary nodular goiter
2. Involved lobe along with isthmus is removed.

SUBTOTAL THYROIDECTOMY:

1. Indications: Multinodular goitre
2. About 8 gm/size of the pulp of little finger is left behind in the tracheo-esophageal groove

JABOULAY'S EVERSION OF SAC

INDICATIONS:

Hydrocele of scrotum

ANAESTHESIA:

Regional anaesthesia

POSITION:

Flat supine position

OPERATIVE STEPS:

1. Area is painted and draped
2. Vertical incision made over the involved scrotum at about 1cm from the median raphe.
3. Incision deepened and tunica vaginalis reached.
4. The sac is separated from the surrounding layers and brought out.
5. The sac is hold in one hand and with the other hand stab is made over the sac and fluid let out.
6. The sac is everted and testis is brought out
7. The sac is sutured behind the cord.
8. The testis is replaced into the scrotum with sulcus facing laterally.
9. After perfect hemostasis drain placed and wound closed in layers.

SUPRA PUBIC CYSTOTOMY

INDICATIONS:

1. Urethral stricture with retention of urine
2. Urethral injury with retention of urine

ANAESTHESIA:

1. General anaesthesia
2. Regional anaesthesia

POSITION

Flat supine position

REQUIREMENTS:

1. Fully distended bladder

OPERATIVE STEPS:

1. Lower abdomen painted & draped.
2. Vertical midline suprapubic incision is made.
3. Skin, subcutaneous tissue & linea alba are divided
4. Rectus and pyrimidalis are retracted laterally
5. By means of gauze the peritoneum is stripped upwards and anterior wall of bladder is exposed.
6. Two stay sutures are applied through relatively avascular part of bladder wall
7. The stay sutures are lifted and a stab incision is made between 2 stay sutures on the bladder wall, evidenced by the gush of urine.
8. Wound is closed around the catheter.
9. Abdominal wound is closed with a dram in the retro pubic space of retzius & dressing applied
10. Foley's catheter connected to Uro-bag.

INTERCOSTAL DRAINAGE

INDICATIONS:

1. Pleural collection of pus/blood/air

ANAESTHESIA:

Local anaesthesia

POSITION:

1. Sitting with pillow in the lap
2. Supine position

OPERATIVE STEPS:

1. The area (hemithorax) painted & draped.
2. The skin of the 5th intercostal space is infiltrated with local anaesthetic agent down to the parietal pleura.
3. A stab wound is made in the 5th intercostal space mid axillary line.
4. A trochar and cannula steadily pushed into the pleural cavity along the upper border of lower rib.
5. Entry into the pleural space is identified by gush of pus/blood /air.
6. Trocar is removed & ICD tube is quickly introduced.
7. Position of the tip of the tube is confirmed by the drainage of pus/air/blood through the ICD tube.
8. Tube is clamped temporarily.
9. The ICD tube is fixed to the chest wall using silk ligature & adhesive tape
10. The tube is connected to water seal drain & the clamp is removed
11. Functioning of ICD is confirmed by the movement of water column.

TRUNCAL VAGOTOMY WITH POSTERIOR GASTRO JEJEUNOSTOMY

INDICATIONS:

Gastric outlet obstruction due to cicatrized duodenal ulcer.

ANAESTHESIA:

General anesthesia

POSITION:

Flat supine position

INCISION:

Upper midline incision

OPERATIVE STEPS:

1. Abdomen painted and drapped.abdomen opened through upper midline incision.
2. The left lobe of the liver is mobilized by dividing the left triangular ligament.
3. The position of the oesophagus is guided by the nasogastric tube.
4. Peritoneum over the abdominal part of esophagus is incised.
5. The phreno esophageal ligament is incised along the same line.
6. Finger is insuniated underneath to enter posterior mediastinum.
7. The stomach is pulled down and towards the left.
8. The anterior trunk is found anterior surface of esophagus and posterior trunk lies some distance separate from the esophagus.
9. About 5-7cm of both trunks are excised and cut ends tied.
10. The deficiency in the hiatus is closed with non absorbable material.
11. The greater omentum,transverse colon are brought out through the laprotomy wound.
12. The transverse mesocolon is opened vertically in the avascular plane to enter the lesser sac to the left of middle colic artery.
13. A vertical fold of posterior wall of stomach is hold with two babcock's 3 inches apart.
14. The stomach opened inbetween the clamps.
15. Now a loop of jejunum of about 10cm is brought into the rent in transverse mesocolon and two babcock's applied 3 inches apart and the jejenum is opened inbetween the clamps.
16. A side to side anastomosis is done between jejunum and posterior wall of stomach in 4 layers.
17. A posterior retrocolic isoperistaltic short loop no tension vertical gastrojejenostomy is done

VASECTOMY

INDICATIONS: Done for the sterilization of males

ANAESTHESIA: Local anaesthesia

POSITION: Supine

OPERATIVE STEPS:

1. Vas is identified at the neck of the scrotum by palpating between 2 fingers.
2. It is fixed by underpinning with a needle.
3. A small incision is made in the scrotal skin right over the vas.
4. The incision is deepened through it's coverings & vas is revealed
5. With a pair of tissue forceps,vas is picked up & the needle is removed.
6. Two artery forceps are applied on the vas ½ an inch apart.
7. The portion of vas between the forceps is excised.
8. Silk ligatures are applied to the cut ends of the vas and artery forceps are taken out.
9. Skin incision is closed with one suture.
10. Procedure repeated on the other side.

CIRCUMCISSION

INDICATIONS:

1. **Phimosis**
2. **Paraphimosis**
3. **Recurrent Balanoposthitis**
4. **Prepucial carcinoma**
5. **Religious**
6. **Genital Herpes**

ANAESTHESIA:

1. General anaesthesia
2. Regional anaesthesia

POSISTION: Supine

OPERATIVE STEPS:

1. The external genitalia & perineum painted and draped.
2. The prepuce is separated from any adhesion by introducing a probe between the prepuce and the dorsal surface of glans as for as coronal sulcus.
3. Two fine artery forceps are placed on two sides of mid dorsal line.
4. By a scissor the mid dorsal line of the prepuce is divided to about 1 cm from the corona.
5. The redundant parts of both prepucial layers are trimmed away in the line parallel to corona, half cm distal to it.
6. All the bleeding vessels are ligated.
7. Skin of the prepuce is sutured to the mucous membrane by fine interrupted catgut sutures taking special precaution to secure the artery of the frenulum within one of these ligatures.
8. After perfect hemostasis dressing applied.

MODIFIED RADICAL MASTECTOMY

INDICATIONS:

1. **Early breast carcinoma stage IIa, IIb, IIIa**
2. **Stage IIIb breast carcinoma after downstaging the disease**

ANAESTHESIA:

General anaesthesia

POSITION: Supine

INCISION:

1. Transverse Elliptical incision over the breast including nipple areola complex. (Stewart Incision)
2. Oblique elliptical incision over the breast including nipple areola complex.

OPERATIVE STEPS:

1. The area painted & draped.
2. Elliptical incision made over the breast including nipple areola complex.
3. Incision deepened, upper flap raised upto clavicle above, lower flap raised upto 5th or 6th rib, medially upto lateral border of sternum, laterally upto anterior border of Latissimus dorsi muscle
4. Whole breast tissue with nipple areola complex, skin over the breast ,pectoral fascia are removed.
5. After retracting the pectoralis major muscle the pectoralis minor is excised along with clavipectoral fascia.
6. The bleeders are cauterized
7. Lateral pectoral nerve and branch of thoracoacromial artery and lateral thoracic artery should be preserved
8. Axillary clearance is performed upto level 3.
9. The clearance is continued until the muscles of the posterior axillary wall are completely cleared off of all fatty and glandular tissue
10. Nerve to latissimus dorsi and nerve to serratus anterior are preserved.
11. Thorough wash given
12. After perfect hemostasis a drain placed and wound closed in layers.

LICHTENSTEIN'S TENSION FREE HERNIOPLASTY

INDICATIONS:

1. **Direct inguinal hernia**
2. **Indirect inguinal hernia**

ANAESTHESIA:

1. **Regional anesthesia**

POSITION:

1. **Flat supine position**

OPERATIVE STEPS:

1. Area painted and draped.
2. Groin incision made ½ an inch above medial 2/3 rd of inguinal ligament.
3. Superficial fatty layer and deep membranous layer of the superficial fascia opened along the incision.(small vessels that come across are cauterized)
4. External oblique is opened upto the superficial inguinal ring.

INDIRECT HERNIA:

-the cord along with sac and its contents are identified.
-the cremastic fascia and internal spermatic fascia are opened.
-cord is separated from the sac & cord lateralized.
-the sac is found lateral to the inferior epigastric artery.
-the sac is opened at the fundus & contents reduced.
-the sac is transfixed at the neck using chromic catgut and excess sac excised.

DIRECT HERNIA:

-the cord is lateralized.
-the sac is medial to the inferior epigastric artery.
-since the sac is a direct one sac is not opened and sometime it may be sliding hernia.
-the defect in the posterior wall is closed with suturing fascia transversalis using catgut.

5. A polypropylene mesh is placed.
6. It is fixed below taking first bite through periosteum of pubic tubercle and along inguinal ligament.
7. The cord is medialised.
8. Above the mesh is fixed to conjoint tendon using prolene without any tension.
9. After perfect hemostasis wound closed in layers.

INCISION AND DRAINAGE (HILTON'S METHOD)

INDICATIONS:

1. Abscess

ANAESTHESIA:

1. General
2. Regional

POSITION: Supine

STEPS:

1. Broad spectrum antibiotics started.
2. After cleaning & draping abscess is aspirated and presence of pus is confirmed.
3. Skin is incised in the line parallel to neurovascular bundle/langer's line in the most dependant part or most prominent part
4. Abscess cavity is opened using sinus forceps breaking up all the possible septae.
5. All loculi are broken up and pus is drained.
6. Drain is kept.
7. Wound is not closed and allowed to granulate & pus is sent for culture sensitivity.
8. Cleaning and dressing done.

TRENDELENBURG PROCEDURE WITH MULTIPLE PERFORATORS LIGATION

INDICATIONS:

1. Varicose veins leg(Saphenofemoral incompetence with perforators incompetence)

CONTRAINDICATIONS;

1. Deep vein thrombosis

ANAESTHESIA: Regional anesthesia

POSITION: Supine

OPERATIVE STEPS:

1. The lower limb to be operated is painted and draped.
2. An oblique incision made just below the groin starting from the site of femoral artery pulsation to 5 cm medially.
3. Subcutaneous tissue dissected & 3 tributaries of GSV divided and ligated.(superficial external pudendal , superficial circumflex iliac & superficial epigastric veins)
4. Clamps applied to great saphenous vein one close to the point where it enters deep fascia and other distally.
5. Double ligatures applied both proximally and disally and vessel cut in between so that flush ligation of the SFJ is done
6. Small horizontal incision made over the site of incompetent perforators.
7. After dissecting the subcutaneous tissue GSV & perforators identified.
8. Perforator divided & ligated at the 'T' junction
9. Similarly all the incompetent perforators are dealt with.
10. After perfect hemostasis skin sutured.
11. Elastocrepe bandage applied from toes to groin.

VENOUS STRIPPING:

1. Stripping of great saphenous vein is done till below knee joint and below knee perforators are ligated.
2. Traditional stripping till ankle joint is not done nowadays to avoid injury to the saphenous nerve.
3. Here, after dividing and ligating GSV, a myer stripper is passed through the GSV from groin & brought out through an incision made just below the knee joint.
4. The knob is applied to the tip of the stripper & vein stripped from below upwards.

INTERCOSTAL DRAINAGE

INDICATIONS:

1. Pleural collection of pus/blood/air

ANAESTHESIA:

Local anaesthesia

POSITION:

1. Sitting with pillow in the lap
2. Supine position

OPERATIVE STEPS:

1. The area (hemithorax) painted & draped.
2. The skin of the 5th intercostal space is infiltrated with local anaesthetic agent down to the parietal pleura.
3. A stab wound is made in the 5th intercostal space mid axillary line.
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6. Trocar is removed & ICD tube is quickly introduced.
7. Position of the tip of the tube is confirmed by the drainage of pus/air/blood through the ICD tube.
8. Tube is clamped temporarily.
9. The ICD tube is fixed to the chest wall using silk ligature & adhesive tape
10. The tube is connected to water seal drain & the clamp is removed
11. Functioning of ICD is confirmed by the movement of water column.

APPENDICECTOMY

INDICATIONS:

1. **Acute appendicitis**
2. **Recurrent appendicitis**

ANAESTHEIA:

General / regional anesthesia

POSITION OF THE PATIENT:

Flat supine position

INCISION:

1. Mc burney's
2. Lanz
3. Rutherford morrison's

OPERATIVE STEPS:

1. Area is painted & suitably draped.
2. Mc Burney's incision is made over the Mc Burney's point and subcutaneous fat divided.
3. External oblique aponeurosis is incised along the line of its fibres
4. Internal oblique and transverses abdominis muscles are identified and are split along the line of fibres.
5. Peritoneum picked up between two straight artery forceps & opened along the line of incision.
6. Caecum delivered through the wound, tinea coli traced & base of the appendix is identified.
7. Mesoappendix divided by clamping, dividing and ligating the vessels.
8. Base of the appendix crushed & ligature applied
9. Appendectomy done (stump - 3 mm)
10. After perfect hemostasis, wound closed in layers, wound dressing applied.