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Subject : SURGICAL PROCEDURES –OTT 2nd Year

(Note : The study material has been composed by our academic cell under the supervision of the Director of the college. The concerned students are hereby advised to study the same thoroughly in addition to their prescribed syllabus , text books/ references and the notes provided by your concerned tutors.)

PLASTIC SURGERY:

CLEFT LIP REPAIR: Correction of a congenital defect, split or opening due to a fusion failure of the upper lip of the fetus.

A cleft lip repair is a congenital deformity that occurs when there is a failure of the two sides of the upper lip to fuse during the embryonic process in fetus.

INDICATIONS:

- Speech disorder.
- Stuttering or impaired voice.
- Physical deformity.
- Baby feeding difficulties.
- Hearing loss.

ANESTHESIA: Under general anesthesia.

POSITION OF PATIENT: The patient is supine with the head at the top of the table stabilized by a padded head rest. The infaint may be wrapped in a mummy like wrap.

SKIN PREPARATION: Extend the preparation from the hair line to the shoulders and down to the table at the sides of the neck.

DRAPING: The patient is usually draped with a head drape Ice, drape sheet and two towels.

PROCEDURE:

- Prior to injecting the anesthetic agent, the skin is marked for the elevation of flaps.
- Local anesthetic containing epinephrine is infiltrate locally to achieve vasoconstriction and aid in operative pain.
- Approach to repair can utilize prolabial flap and lip advancement flaps.
- The flaps are isolated and advanced to achieve desired outcome including restoration of the proper shape to the philtrum and bow of the lip.
- The peak of the bow is made 2-2.5mm on either side of the midline.
- The lateral elements are sutured to reconstruct nasal sill.
- The mucosa is turned down to create the labial Sulcus.
- The muscle is divided inferiorly to accompany the vermillion flap.

- The prolabial skin flap is approximated and the Alar and intra-nasal incisions are closed.
- The incision is protected with antibiotic ointment and the cheeks are splinted with a Logan's bowl (to counter the effect of crying).

INSTRUMENTS:

- Basic plastic procedure tray.
- Caliper, ruler, lip clamp, Foment retractor, Beaver knife hand and Logan's bow.

CLEFT PALATE REPAIR: Correction of a congenital defect, split or opening in the palate due to fuse, while the fetus is developing.

INDICATIONS: Same as cleft lip repair.

ANESTHESIA: Under general anesthesia.

POSITION OF PATIENT: The patient is supine with the head at the top edge of the table stabilized by a padded head rest.

SKIN PREPARATION: Extend the preparation from the hairline to the shoulders and down to the table at the sides of neck.

DRAPING: The patient is usually draped with a head drape Ice, drape sheet and 2 towels.

PROCEDURE:

- A local anesthesia containing epinephrine is infiltrated locally to aid Hemostasis.
- A mouth gag and a throat pack are placed to prevent blood from entering trickling down the throat.
- To repair a complete unilateral defect, soft palate margins are incised.
- Layers from oral mucosa, muscle and nasal mucosa are developed and mucoperiosteal flaps are elevated that are the part of the defect.
- Nasal mucosa flaps are freed and sutured and the nasal mucosa of the soft palate is sutured.
- The greater palliative vessels are preserved.
- Holes may be drilled in the hard palate for suture placement.
- Muscular layers and the oral mucosa are sutured.
- If lips appear vertically short, a small triangular flap is inserted into the medical lip just above the vermillion at the vermillion cutaneous junction.

INSTRUMENTS:

- Basic plastic procedure tray.
- Power drill (e.g. micro Stryker) cord and drill bits.
- Skin hooks, Dingmans mouth gag with blades.
- Palate elevator etc.

REDUCTION OF NASAL FRACTURE: Realignment of nasal fracture and fixation of fractured nasal cartilage, bones and or septum.

ANESTHESIA: Local /general anesthesia.

POSITION OF PATIENT: The patient may be placed in supine position or semi-fowlers' position.

SKIN PREPARATION:

- Begin at the external nose, prepare the face and neck extending the preparation from the hair line to the shoulders and down to the table at the sides of neck.

DRAPING: The patient is usually draped with a head drape.

SURGICAL STEPS:

- A topical anesthesia e.g. pontocaine, lidocaine etc or a local anesthesia with epinephrine is injected to provide anesthesia and Hemostasis.
- A forcep (e.g. Asch) is placed to provide traction under the nasal bones.
- Nasal packing is inserted and a nasal splint is applied.
- In case of unsatisfactory closed reduction, open reduction is indicated to expose the septum and portion of the nasal bone.
- The fragments may be stabilized with packing or by intra nasal sutures.
- Nasal packing is inserted with antibiotic ointment and an external nasal splint is applied.

INSTRUMENTS:

- Nasal preparation instrument tray
- Asch forceps, circle forceps, nasal speculum, ruler
- Nasal procedure tray
- Basic plastic procedure tray

DIGITAL FLEXOR TENDON REPAIR: Approximation of several ends of a tendon caused by injury or a failed previous tendon repair.

ANESTHESIA: General, Regional or Local Anesthesia.

POSITION OF PATIENT: The patient is supine; the arm on the affected side is extended on a padded hand table while the arm on the unaffected side may be extended on a padded arm board. A tourniquet is applied high on the affected arm.

SKIN PREPARATION: Begin at the repair site, prepares the hand. Extend the preparation from the fingertips to the level of the tourniquet.

DRAPING: The extremity is abducted, elevated and grasped and a sheet is draped over the end of the hand table. A towel is folded, wrapped around the top of the arm and clipped.

SURGICAL STEPS:

- An incision is made according to the site of the injury (mid-lateral digital incision often used).
- Care is taken to avoid injury to neuro vascular bundles.

- The proximal tendon end is retrieved and if the length is not sufficient, a graft (e.g. from the Palmaris longus tendon) is prepared.
- The tendon ends are approximated and incase tendon insertion is involved, suture to the bone may be facilitated using fine drill holes.
- The suture fixing the tendon grafts to the insertion is tied over a button on the dorsum of the distal phalanx to prevent soft tissue necrosis.
- The wound is closed and a splint is applied.

INSTRUMENTS:

- Major orthopedic procedure tray
- Plastic procedure tray
- Skin hooks, hand drill, fine drill points
- ALM self retaining retractor

PHERIPHERAL NERVE REPAIR: The complete or partial anastomosis of a transected or otherwise injured peripheral nerve. Peripheral nerve may be completely or partially divided by trauma such as acts of violence, burns or crush injury or during the course of surgery, particularly with excision of malignant tumor.

ANESTHESIA: General / regional or local.

POSITION OF THE PATIENT: The complete or partial anastomosis of a transected or otherwise injured peripheral nerve.

Peripheral nerve may be completed or partially divided by trauma such as acts of violence, burns or crush injury or during the course of surgery, particularly with excision of malignant tumor.

ANESTHESIA: General /regional or local

POSITION OF PATIENT: The patient is supine with the arm on the affected side may be extended on a padded arm rest/hand table. A tourniquet is applied to the arm or the affected extremity and a safety strap is secured over the thigh of the unaffected extremity.

SKIN PREPARATION:

- For upper extremity peripheral nerve repair, begin at the repair site, prepare the hand. Extend the preparation from the fingertips to the level of the tourniquet.
- For lower extremity PNR, begin at the repair site, prepare the foot. Extend the preparation from the toes to the level of the tourniquet.

DRAPING: The extremity is abducted, elevated and grasped and a sheet is draped over the end of hand table. A towel is folded, wrapped around the affected extremity and clipped.

PROCEDURE:

- For upper or lower extremity procedures, a pneumatic tourniquet is utilized.
- Wound cleaning and trimming of bone ends are done. Skin and an incision extending beyond the anticipated site of mobilization are made.
- The uninvolved nerve proximal and distal to the site of injury is carefully mobilized prior to dissecting and trimming the involved segment.

- To preserve alignment, longitudinal epineurial vessels are identified and sutures are placed.
- Care is taken to avoid injury to the local nerve branches.
- Anastomosis is achieved after fascicles are rotationally aligned and approximated using fine nylon sutures (8-0 to 10-0 monofilaments).
- Hemostasis is achieved and the wounds are closed and splinting is applied as required.

INSTRUMENTS:

- Basic plastic procedure tray.
- Nerve stimulator probe.
- Micro-elevator, dissector and Castroviejo vennas scissor etc.

PALMER FASCIECTOMY: Palmer fasciectomy is a surgical procedure that involves the removal of all or partial part of the palmer fascia.

INDICATIONS:

- A flexion contracture of more than 30 degree at the MCP (Metacarpophalanged joint).
- Any contracture at the proximal interphalanged joint.
- Dupuytren's contracture hereditary condition caused by a benign thickening of fibrous connective tissue in the palmer subcutaneous tissue with nodules fixed to the palmer fascia.

ANESTHESIA: General/ regional or local.

POSITION AND SKIN PREPARATION: Same as digital flexor tendon repair.

DRAPING: The extremity is abducted, elevated and grasped and a sheet is draped over the end of the hand table. A towel is folded, wrapped around the top of the arm and clipped.

PROCEDURE:

- A short longitudinal palmer incision is made for less involved presentation.
- The restrictive band is ressected
- A longer incision with z- plasty configuration is made to create flaps and lengthen the scar to avoid contracture.
- The palmer fascia is ressected distally.
- Care is taken to avoid injury to digital nerves and flexor tendons.
- Wound closure may be done primary suture using z- plasty closure or full thickness free skin graft may be required (e.g. from the medial aspect of the ipsilateral arm.
- An anterior splint is applied

INSTRUMENTS:

- Basic plastic procedure tray
- Skin hooks and A/M self retaining retractor.

REDUCTION MAMMOPLASTY: Excision of breast tissue hyperplasia with recontouring of the breasts.

INDICATIONS:

- Extreme virginal hypertrophy of the breast (gigantomachia) leads to bra –strap grooving, mammary inter triage, headache.
- To elevate the painful symptoms associated with excessive breast weight.

ANESTHESIA: General anesthesia

POSITION OF PATIENT: The patient is placed symmetrically on the table in supine position with arms on padded arm boards.

SKIN PREPARATION: Prepare both breasts beginning at the nipples, extend preparation from the neckline to the level of the iliac crests and down to the table at the side, including the axilla.

DRAPING: Folded towels and a disposable transverse sheet may complete the draping.

PROCEDURE:

- Approaches includes:-
  - Lateralizing procedure
  - Inverted T procedure
  - Lassos reduction modification
  - Lejour reduction modification

❖ **INVERTED T BREAST REDUCTION:**

- The incisions have usually been marked with ink preoperatively.
- The tissues are infiltrated with local anesthetic with epinephrine to reduce bleeding.
- An incision circumscribes the areola which is left attached to underlying tissue as a pedicle graft with its neurovascular attachments.
- The skin above the areola is undermined to create "thick" skin flaps using a knife.
- A wedge of excessive breast skin and glandular and a dispose tissue are excised inferiorly, taking care to preserve skin vascularity.
- Liposuction may be employed to reduce the volume of fat to be excised.
- The procedure may also be performed as an endoscopic assisted procedure.
- The new sites for nipple replacement are carefully cutout of the skin.
- The nipple on the pedicle is brought through the new opening.
- The breast is reconstructed by approximating the medial and lateral breast tissue with the skin flaps inferior to the new nipple site and transversely in the IMF, creating an inverted T.
- Drainage tubing may be inserted into the vertical incision.
- The procedure is repeated on the contra lateral breast.
- Drainage tubing is connected with a Y connector and attached to a closed suction device.
- A bulky dressing and a surgical bra for firm support are applied.

INSTRUMENTS:

- Basic /minor procedure tray.
- Fiber-optic lighted retractor with sleeve, blades and cord.
- Liposuction hand piece blunt section cannula.

AUGMENTATION MAMMOPLASTY: Implantation of breast prosthesis to enhance the appearance of the breast.

INDICATIONS:

- To make the breasts appear large.
- To improve breast shape or to recreate the breast following surgery.
- Micromastia (unilateral or bilateral.)
- Postpartum involution of breasts.
- Ptosis and post surgical deformity.

ANESTHESIA: General or local with conscious sedation

POSITION OF PATIENT: The patient is placed in supine position with arms extended, abducted and secured in position on padded arm boards at approximate an 80 degree angle.

SKIN PREPARATION: Prepare both the breasts, beginning at the site of incision (periareolar, transaxilliary, inframammary or transumblical). Extend preparation from the neckline to below the umbilicus, using the extra care to prepare the axilla well and down to the table at the sides.

DRAPING: Folded towels and a disposable transverse sheet may be used for all of the approaches, except for transumblical, for which a Laprotomy sheet is preferred.

SURGICAL APPROACHES:-

a) Inframammary Approach.
b) Peri Aerolar Approach.
c) Transaxillary Approach.
d) Trans umbilical Approach.

PROCEDURE OF INFRAMAMMARY APPROACH:-

- A 3 to 4cm incision is made just above the inframammary crease.
- A flap is developed inferiorly to the pectoralis fascia.
- A plane is developed between the pectoralis fascia and the posterior capsule of the breast.
- A pocket is created by blunt dissection to accommodate the implant.
- Care is taken to avoid intercostals nerve damage.
- Meticulous Hemostasis is obtained prior to implant insertion.
- A fiber-optic lighted retractor may be employed.
- The implant is inserted and the subcutaneous flap is approximated.
- The process is repeated bilaterally.
- The patient may be placed in a sitting position following insertion of the implants to assess the size and symmetry of the argumentation.
- The skin is closed using a running Subcuticular closure.

INSTRUMENTS:

- Basic/minor procedure tray.
- Bipolar bayonet electro surgical forceps and cord.
- Fiber optic lighted retractor, blades and cord.

ABDOMINAL LIPECTOMY OR ABDOMINOPLASTY: The repair of a lax, redundant abdominal wall i.e. the excision of a redundant apron of subcutaneous tissue (and skin).

INDICATIONS:

- To lessen the discomfort associated with performing daily tasks.
- Concerned regarding personal hygiene.
- For cosmoses.

ANESTHESIA: Under general anesthesia.

POSITION OF PATIENT: Supine.

SKIN PREPARATION: Begin preparing below the umbilicus, extending from the midthorax to the knees and down to the table at the sides.

DRAPING: Folded towels and a transverse sheet complete the draping.

SURGICAL STEPS:

- A-U-M Incisional repair
- The M incision is made above the umbilicus and the U incision is made with its centre just above the pubis symphysis, the lateral extent of which meets with the M incision bilaterally.
- The umbilicus on a pedicle may be incised in a diamond shape, preserving its support and blood supply for later replacement under the flap.
- Dissection is begun at the lower portion of the U incision and progresses upward bilaterally; a fine layer of areola tissue over the fascia is retained.
- Similar dissection is done superiorly with the M incision.
- The amount of intervening skin and adipose tissue to be excised carefully estimated before removal so that the defect can be closed with moderate tension.
- Diastases of the rectus abdominis muscle are plicated.
- A ventral hernia, if present is repaired.
- The umbilicus is brought through an appropriately located position in the superior wound flap and sutured.
- The wound is closed with heavy absorbable suture.
- The skin may be closed with a Subcuticular running suture.
- Drain may be applied.

INSTRUMENTS:

- Basic/minor procedure tray.
- Extra Crile and Kocher forceps.
- Fiber optic retractor with blades.
- Hopkins rigid endoscope, electro-surgical suction irrigator.
- Dissector, scissors, electrosurgical scissor, suturing device, Allis clamps.

LIPOSUCTION: Removal of localized deposits of excessive subcutaneous fat by suctioning.

INDICATIONS:

- Cosmoses
- To remove lipomas
- To treat Gynacomastia
- To evacuate organized hematomas

ANESTHESIA: General anesthesia, regional or local anesthesia may be used in conjunction with conious sedation.

POSITION OF PATIENT: The patient is positioned as for any other surgery performed on that part of the body.

SKIN PREPARATION: Begin the preparation at the site of the most central incision and extend the preparation to an appropriate distance.

DRAPING: A sheet is draped over the end of the table. A towel may be folded as necessary, placed over the pubic area and secures with a sterile plastic adhesive drape. Cuffed drape sheets are tucked in at the patient's sides an additional sheet is draped under the legs and thighs.

PROCEDURE:

- The target areas are infused with large amount of extremely dilute buffered lidocaine with epinephrine in lactated Ringer's solution until the sight appears turgid.
- Through many small incisions, blunt suction tipped cannula are inserted and tunneled under the skin, separating it from underlying subcutaneous and connective tissue.
- Excess subcutaneous fat is suctioned from the pre tunneled area using a high pressure Vaccum.
- Smaller cannulas are used around the periphery of the site to transitionally mold and contour the targeted area.
- An electric, compressed air or compressed nitrogen powered power assisted liposuction device may be used to produce a rapid in and out or rotary motion (or oscillations of the cannula, relieving some of the physical effort for the surgeon).
- The incisions may be closed with a Subcuticular stitch.
- A compression dressing is applied on the extremities and a compression garment is applied for the torso.

INSTRUMENTS:

- Limited procedure tray.
- Fiber optic retractor, blades.
- Blunt suction cannula.
- Nitrogen or air tank to power liposuction.

OTOPLASTY: Otoplasty involves reshaping, remolding and/or reforming the external ear.

INDICATIONS:

- To correct congenital deformities of ear(s) as
- "Microtia" (small, often misshapen ears)
- "Anotia" (absence of the external ear)
- "Lop ears" (prominent ears that protrude unduly from the sides of the head)

Reconstruction of the ear can be performed in one of the three ways:

1. With prosthetic replacement
2. With prosthetic frame work
3. With outologous tissue and prosthetic frame work

ANESTHESIA: General or local.

POSITION OF PATIENT: The patient is supine with the head on a padded or gel head rest to see both the ears same time.

SKIN PREPARATION: Begin by replacing a small cotton ball in each ear to prevent the solution from pooling in the ears; each external ear extend preparation from the hair line to the shoulders and down to the table at the sides.

DRAPING: The patient is draped with a "head drape" with both ears exposed.

PROCEDURE OF "LOOP EAR SURGERY":

- A planned skin excision is marked behind the ear.
- A new antihelical fold is marked.
- Several diagonal lines are marked on corresponding sides of the elliptical incision.
- An incision is made on the distal side and a flap is undermined, taking care not to compromise the circulation.
- The anterior surface of the cartilage is exposed and abraded with a rasp to reduce the perichondrium, thereby subsequently reducing forward curling of the ear.
- A predetermined wedge may be excised.
- Mattress sutures are inserted through the previously made markings.
- Over lapping skin is excised.
- The ear skin is sutured with unabsorbable interrupted sutures (4-0 or 5-0).
- A compression dressing is applied.

INSTRUMENTS:

- Basic Plastic Procedure tray
- Small rasp, small periosteal elevator
- Small bone cutter, small bone ronguer
- Minor Orthopedic procedure tray
- Prefabricated prosthesis

OPEN REDUCTION OF ORBITAL FLOOR FRACTURE: Elevation and restoration of bone integrity supporting the eye and intra orbital contents.

ANESTHESIA: General anesthesia with endotracheal intubation.

POSITION OF PATIENT: The patient may be supine with the hands/head supported by on a padded or gel head rest.

SKIN PREPARATION: Begin by preparing the operative eye lid. Prepare the face and neck from the hair line to the shoulders and down to the table at the sides.

DRAPING: The patient is usually draped with a head drape.

PROCEDURE:

- Initially the fracture site is assessed and debris is removed.
- An incision is made over the infra orbital rim and continued down to the Periosteum.
- The Periosteum is incised and reflected over the fracture site.
- Care is taken not to undermine the tissue excessively, as devascularization may occur.
- Various structures including the supra and infra nerves as well as the extra ocular muscles must be identified and protected.
- The herniated contents of the orbital cavity are reduced and the defect in the orbital floor may be repaired with synthetic material (e.g. Teflon) autogenous cartilage or autogenous bone.
- The globe is rotated to test the security of the implant and to make sure there is entrapment involving inferior rectus muscle.
- The Periosteum is sutured back to its site of origin, as are the orbicular occuli muscle and skin.
- An antibiotic ophthalmic ointment is applied and eye patch is utilized.

INSTRUMENTS:

- Basic eye procedure tray
- Globe and orbit procedure tray
- Minor orthopedic procedure tray
- Bone grafting instruments
- Bone holes, high speed power drill

REDUCTION OF ZYGOMATIC FRACTURE: Correction of the fractures of the cheek bones.

ANESTHESIA: General or local

POSITION OF PATIENT: The patient may be in supine position with the head supported on a padded or gel head rest.

SKIN PREPARATION: Begin preparation on the affected cheek; prepare the face and neck, from the hair line to the shoulders and down to the table at the sides.

The eyes are irrigated with normal saline from inner to outer canthus.

DRAPING: The patient is usually draped with a head drape i.e. drape sheet and two towels under the head with the upper most towel wrapped around the head and clipped.

PROCEDURE:

- Small incisions are made in the lateral third of the eye brow and in the infra orbital region to access the fracture fragments.
- The Periosteum is elevated conservatively.
- To prevent devascularization.
- Bone graft with calvarial bone is indicated if there is a gap > 5mm in the bone.
- If the inter fragment gap is < 5mm, wires or multiplates and or micro plates with screws are required for the fixation.

- Antibiotics intravenously and in irrigation solutions may be used to avoid infection.
- The plates are removed after the bone heals.
- The position of the bone fragments can also be fixed by stainless steel wires (e.g. wires) Steinmann pins and titanium devices.
- Holes are drilled into the fragments are realigned and the fixation device of choice is used.
- The wound is irrigated with saline or antibiotic irrigation and the incisions are closed.

INSTRUMENTS:

- Minor orthopedic procedure tray
- Kerri son and ronguer tray
- Jaw bone hook, zygomatic bone hook
- Fixation devices e.g. pins, K- wires,etc
- High speed power drill

REDUCTION OF MANDIBULAR FRACTURE:

Correction of mal occlusion (false closure) of the Jaw's resulting from a fracture of the lower jaw.

POSITION OF PATIENT: The patient may be supine position with the head tilted backwards slightly; a pad or gel head rest may be used.

SKIN PREPARATION: Begin with the face, extends the preparation from the hairline to the shoulder and down to the table at the sides of the neck.

DRAPING: The patient is usually draped with a head drape i.e. drape sheet and two towels under the head.

PROCEDURE:

- Open reduction is indicated in displaced and unstable fractures with associated and unstable fractures with associated mid face fracture.
- The line of the jaw is marked prior to local injection.
- One or more incisions are made in the mucosa, below the inferior border of the mandible.
- The fracture site is exposed and the Periosteum is reflected.
- The fracture is reduced by manipulation and arch bars may be applied prior to open reduction and internal fixation to establish occlusion or fixation may be achieved with dynamic compression plates and screws.
- Holes are drilled for the screws into the mandible on both the sides of the fracture and stainless steel wires are passed through the holes to maintain alignment.
- The fracture site may be stabilized with an autologous bone graft or bone chips.
- The wound is irrigated and closed in layers and a small drain may be placed.

INSTRUMENTS:

- Minor orthopedic procedure tray.
- Bone grafting instrument (include bone dowel and tamp).
- Wider tongue depressor.

- Bone holding clamps, high speed drill and compression plates and screws.

RHINOPLASTY: Modification of the external appearance of the nose.

Rhinoplasty is performed to improve the appearance of the nose and enhance the patient's physical appearance.

To elevate nasal airway obstruction due to deviation of the septum.

ANESTHESIA: Local or general but local anesthesia with conscious sedation is usually preferred.

POSITION OF PATIENT: The patient is in supine position, a padded or gel headrest is often used.

SKIN PREPARATION: Begin at the external nose prepare the face and neck, extending the preparation from hair line to the shoulders and down to the table at the sides of the neck.

DRAPING: The patient is usually draped with a "drape sheet" i.e. drape sheet and two towels under the head with the upper most towels wrapped around the head and clipped.

PROCEDURE:

- An intercartilaginious incision is made through the nares along the rim of the upper lateral cartilage bilaterally.
- The incisions are connected, freeing the skin from over the dorsal septum and the columella anteriorly.
- Prominent septal, lateral and alarcartilages are excised and after reassessment, are retrimmed as necessary. The nasal bones are osteotomized laterally and medially and compressed to in fracture the bones, creating a more "normal" contour.
- Alignment of septum is achieved.
- The anterior septum and columella are sutured, alar incisions and marginal (rim) incisions) of the lower lateral cartilages are sutured as well.
- Intra nasal packing is inserted and an external splint is applied.

INSTRUMENTS:

- Atomizer scissor (e.g. straight mayo).
- Nasal procedure tray, smooth Bayonet forceps.
- Basic plastic procedure tray.
- Beaver knife handle, bipolar bayonet forceps.

MENTOPLASTY (GENIOPLASTY) AUGMENTATION: Modification of the appearance of the chin with the insertion of the prosthesis.

INDICATIONS:

- To add size and contour to the chin, thereby balance the features of the face.
- To improve the cosmetic appearance of face.

ANESTHESIA: Local or general anesthesia.

POSITION OF PATIENT: The patient is in supine position with the head extended backwards.

SKIN PREPARATION: Begin at the chin and prepare the face. Extend the preparation from the hair line to the shoulders and down to the table at the sides of the neck.

DRAPING: The patient is usually draped with a "head drape" e.g. drape sheet and two towels under the head.

PROCEDURE:

- A short transverse incision is made in the sub-mental region or in the labial Sulcus.
- A supraperiosteal pocket is developed by undermining the Periosteum with a periosteal elevator, usually directly over the leading edge of chin, inferior to the mental nerve.
- Care must be taken not to undermine the tissue too much or the blood supply to the area may be compromised.
- Chin bone sizes are employed until the desired choice of shape and size is determined.
- The prosthesis/implant is positioned over the surface of the chin, aligning it according to the blue line that is found in the midline of commercially made implants.
- The implant may e fixed or stabilized with a deep mattress suture.
- The Trans oral wound is irrigated with saline or antibiotic solution and closed in layers.
- A bulky pressure dressing is applied.
- The sub-mental wound is irrigated with saline or an antibiotic solution and closed in layers.

INSTRUMENTS:

- Basic plastic procedure tray
- Bipolar batonet forceps
- Chin prosthesis e.g. Medpor, Proplast I&II

BLEPHAROPLATSY: Excision of redundant muscle and skin of the eye lids to enhance one's physical appearance.

INDICATIONS:

- Visual interference
- Cosmetic reason

ANESTHESIA: Local anesthesia is usually preferred.

POSITION OF PATIENT: The patient is in supine position, a padded or gel head rest may be used.

SKIN PREPARATION: Begin at the eyelids and prepare the face, extend the preparation from the hairline to the shoulders and down to the table at the sides of neck.

DRAPING: Same as Rhinoplasty

PROCEDURE:

Transcutaneous approach:

- An elliptical incision is made in the recess of the orbitpalpebral fold of the upper lid according to previously placed markings.
- The orbicularis oculi muscle is incised parallel to its fibers at the apex of the bulge.
- The fat protrudes through the incision and is excised.
- The upper lid incisions may be covered with moist saline sponge's while resection of a portion of the lower lid is done.
- The skin is undermined and orbicular is oculimuscle is split.
- Fat compartments are isolated, the fat is repositioned, the skin is redraped and the redundant skin is ressected.
- The upper lids are checked for bleeding.
- Hemostasis is obtained.
- Incisions in the upper lids are closed with fine interrupted sutures.
- The process is repeated for lower lids.
- An occlusive dressing is applied.

INSTRUMENTS:

- Basic plastic procedure tray
- Bipolar bayonet forceps

DERMABRASION: Sanding the skin to smooth scars and resurface irregularities in the skin.

INDICATIONS:

- Scars (from facial acne vulgaris and chicken pox).
- Remove tattoos and remove or minimize fine wrinkling around the mouth.

ANESTHESIA: Local or general

POSITION OF PATIENT: When the scar is on the face, the patient is positioned supine with the head placed on a padded o gel head rest.

SKIN PREPARATION: Begin at the location of scar, if the scar is on the cheek, begin at from the cheek. Extend the preparation from the hair line to the shoulders and down to the table at the sides of the neck.

DRAPING: The patient is usually draped with a drape i.e. drape sheet and two towels under the head with the uppermost towel wrapped around the head and clipped.

PROCEDURE:

- The skin is marked prior to the injection of the anesthesia.
- The skin is stretched by hand and held taunt as the surgeon abrades the epidermis using a motor-driven sanding cylinder and /or a wire brush.
- When a laser is used to resurface the skin, all laser safety measures must be employed.
- The advantage of using the ultra pulsed laser is that it generates a minimal amount of heat that does not damage surrounding tissue.

- The area is irrigated copiously with saline during the procedure.
- The wound may be dressed with non adherent gauze and gauze sponges moistened faith saline.
- A compression bandage may be applied.

INSTRUMENTS:

- Limited procedure tray
- Dermabrader and cord (e.g. Stryker), wire brush and sanding cylinder.

ANESTHESIA: General, regional or local.

POSITION OF PATIENT: The patient is supine, and brought as close to the ipsilateral edge of the table as possible. The arm on the affected side may be extended on a padded hand table.

SKIN PREPERATION: For syndactyly of the fingers, begin with the fingers at the area of syndactyly and prepare the hand. Extend the preparation from the fingers to the level of tourniquet on the affected arm.

DRAPING: For syndactyly of the fingers, the hand is grasped, abducted and elevated with tube stockinet as a sheet is draped over the hand table. A splint sheet is draped over the arm.

PROCEDURE:

- The pediatric patient is supine on the table.
- The lower segment of the table may be removed to permit closer access to the pediatric patient.
- Skin areas are marked prior to the skin preparation and a pediatric pneumatic tourniquet may be used.
- Z- Plasty type incisions are made in the webbing to create flaps at the sides of the fingers for the web spacing reconstruction, this avoids later contracture.
- The neuro vascular bundles are protected.
- Boney and ligamentous defects are corrected.
- The flaps are rotated and sutured into position.
- If there are areas where the skin is absent, full thickness grafts are obtained close the defects.
- The incisions are closed and stents may be sutured over the grafts.
- If a tourniquet is used, it is deflated.
- A bulky dressing is applied and splint is used to immobilize the hand.

INSTRUMENTS:

- Minor orthopedic procedure tray.
- Plastic procedure tray.
- Vascular shunt tray.
- Skin hooks (on tray), bipolar bayonet forceps and cord.