

4. HERNIA

Hernia is the protrusion of viscus or a part of viscus through the wall that contains it. The commonest variety of hernia is protrusion of viscus through the abdominal wall eg. inguinal, femoral, umbilical, and incisional.

The hernia is the commonest condition seen in the geriatric practice. More than 50% of the patients attending the Geriatric surgical out patient department have hernia. The presence of inguinal hernia in the elderly give rise to swelling in the groin, discomfort and problems in ambulation. The complications of hernia like obstruction and strangulation pose grave risk to the elderly. The emergency surgical correction of strangulated hernia with bowel resection and anastomosis carries high mortality.

The hernia can be surgically corrected easily in the primary and secondary level hospitals. Once corrected the elderly gain confidence to move about freely, enhancing their quality of life.

Inguinal Hernia

Symptoms

- ◆ Swelling in the groin region
- ◆ Difficulty in passing stools
- ◆ Difficulty in voiding urine
- ◆ Chronic cough
- ◆ Pain (when tendency to herniate, or complicated)
- ◆ Associated raised intra abdominal pressure due to mass or ascitis

Signs

- Swelling in the groin in standing or lying posture.
- Cough impulse present.
- Reducibility (fully, partly)
- Irreducibility and tenderness present if complicated.

Predisposing factors in elders

Increased abdominal pressure

- ❖ Chronic cough (COPD, Pulmonary Tuberculosis)
- ❖ Straining at micturition, (prostatic enlargement, stricture urethra)
- ❖ Straining at defecation, constipation

Stretching of musculature as in obesity, intra abdominal malignancy

Muscle weakness in ageing, poor nutrition, previous surgery, loss of nerve supply

Complications

- Irreducibility (partly or fully)
- Obstruction of the gut.
- Strangulation of gut.

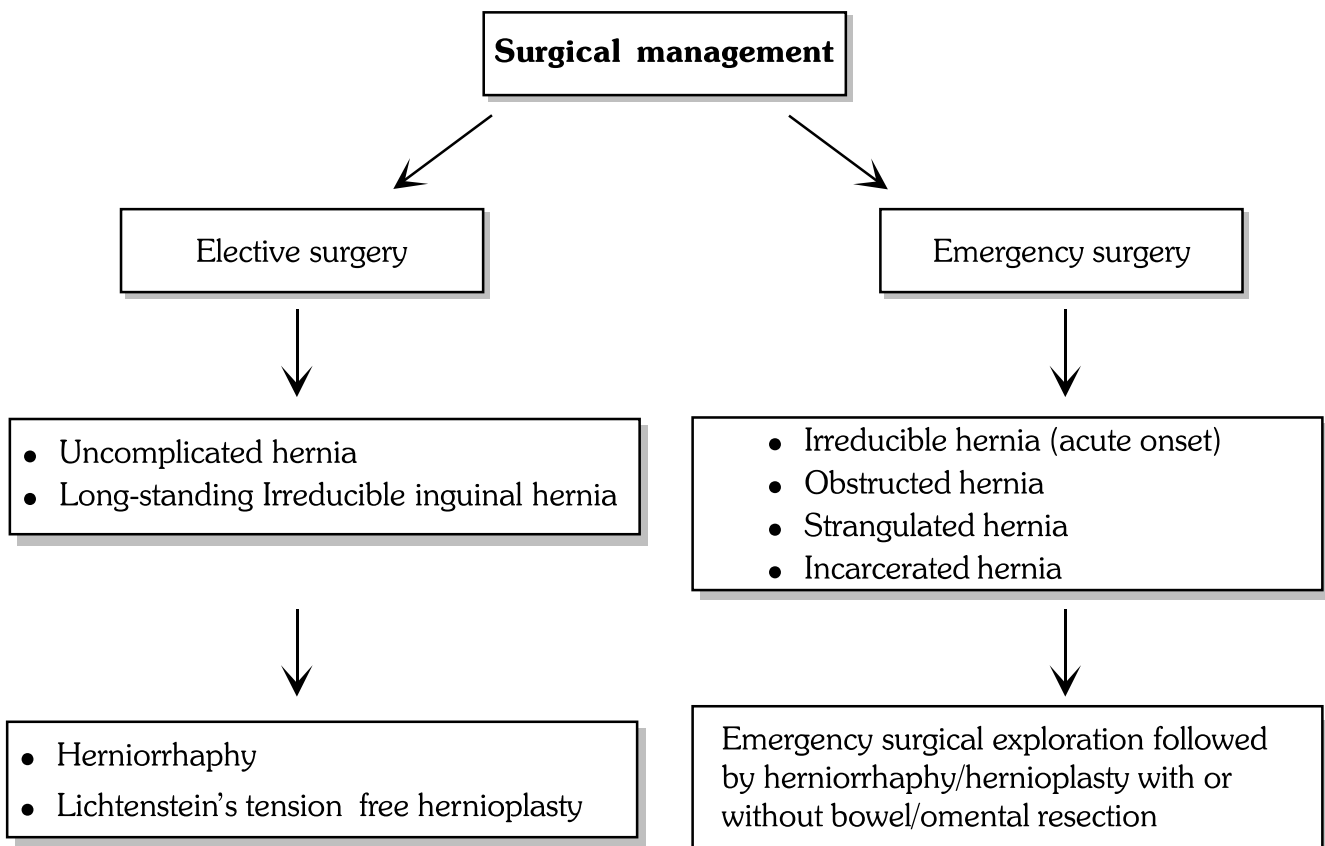
Management guidelines

Preoperative multi - dimensional Geriatric assessment

- ◆ Complete history including medication list
- ◆ General examination to identify
 - Possible cause of hernia
 - Co morbid conditions
- ◆ Abdominal examination including digital rectal examination
 - Pulse, BP, Cardiac workup, ECG, ECHO
 - Chest workup. Chest X-ray, pulmonary function test
 - Blood sugar estimation to rule out diabetes
 - Renal workup, abdomen X-ray, ultrasonogram
 - Investigations to rule out intra abdominal malignancy

Preoperative preparation

- ❖ Pre-operative treatment of comorbid conditions
(Treatment for anemia, diabetes, hypertension, IHD)
- ❖ Treatment of the cause of hernia
 - Pulmonary tuberculosis
 - Constipation
 - Transurethral resection for benign hypertrophy of prostate



❖ **Herniorrhaphy**

Strengthen the posterior wall of the inguinal canal by suturing the inguinal ligament with conjoint tendon using non-absorbable sutures (if the muscle strength is adequate).

❖ **Liechtenstein's tension free Hernioplasty.**

Open the inguinal canal through the inguinal incision. Lateralise the ilioinguinal nerve. Define Inguinal ligament and conjoint tendon. Open cremastic fascia and internal spermatic fascia. Separate the cord structures from sac. Perform herniotomy. Strengthen posterior wall by placing prolene mesh, which is fixed at pubic tubercle medially and inguinal ligament below and conjoint tendon above. Place cord structures back into the canal and close wound in layers.

❖ **In emergency exploration,**

Open inguinal canal and deliver sac with its content. Open the sac, inspect the contents and let out the collected fluid if any. Assess viability of bowel/omentum and then plan accordingly. Reduce the contents if viable then excise the sac and perform herniorrhaphy. Resect and anastomose the bowel / excise omentum if not viable followed by herniorrhaphy.

Assessment of bowel viability in case of strangulated hernia

- ◆ Colour
- ◆ Texture
- ◆ Return of peristalsis
- ◆ When in doubt, use oxygenation and hot compression

Bowel resection and anastomosis

- ◆ Isolate the non-viable loop by placing sterile packs around
- ◆ Use occlusion clamps at the viable ends
- ◆ Apply crushing clamps to the non-viable parts of bowel
- ◆ Excises the non-viable part of the bowel between the clamps
- ◆ Remove more on the anti-mesentric border of the bowel to prevent avascular necrosis
- ◆ Avoid spillage of the contents while resection
- ◆ Excise mesentery close to the bowel
- ◆ Check for viability of the cut edge of the bowel

- ◆ Prefer two layered closure with inner all layer continuous absorbable sutures and outer seromuscular interrupted non-absorbable sutures.
- ◆ Prevent valvular effect and maintain the bowel patency to the maximum
- ◆ Secure perfect hemostasis
- ◆ Close mesenteric rent to prevent internal herniation

Postoperative management

- Complete bed rest
- ½ hourly PTR, 2 hourly BP, Intake / output chart
- IV fluids. (4 to 6 hours)
- Antibiotics (preferably oral Cap Amox)

Postoperative complication

- Pain
- Urinary retention
- Infection
- Post herniorrhaphy hydrocele
- Recurrence