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General Surgery

COMPARITIVE STUDY BETWEEN INGUINAL HERNIOPLASTY AND HERNIORAPHY

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KEYWORDS :

INTRODUCTION

A hernia is defined as an area of weakness or complete disruption of the fibromuscular tissues of the body wall. Structures arising from the cavity contained by the body wall can pass through, or herniate, through such a defect. While the definition is straightforward, the terminology is often misrepresented. It should be clear that hernia refers to the actual anatomic weakness or defect, and hernia contents describe those structures that pass through the defect.

Hernias are among the oldest known actions of humankind, and surgical repair of the inguinal hernia is the most common general surgery procedure performed today. Today, laparoscopic techniques have been validated as safe and effective in the treatment of groin hernias and have become commonplace.

MATERIALS AND METHODS

This comparative study of herniorrhaphy and hernioplasties was conducted in 62 patients who were admitted and treated in surgical setting from JULY 2021 to JUNE 2022 at GGH,KURNOOL.

Patients were evaluated thoroughly with physical examination, routine investigations, and ultrasonography. Patients were selected either for herniorrhaphy or hernioplasty depending on the age of presentation, tone of the abdominal muscles and size of the defect.

All the patients were explained about the procedures preoperatively and consent was taken for the surgery. All the operated patients were followed up for a period of one year. In the study paediatric hernias subjected to herniotomies were excluded from the study

RESULTS

This study showed that majority of the patients who were subjected to herniorrhaphy were patients below the age of 50 years with good abdominal tone and majority of people above 60 years with weak abdominal tone were subjected for hernioplasty. The patients were followed up for 1 year, neither of the patients had any recurrence or other complications.

Even though the number of patients who underwent herniorrhaphy is almost equal to hernioplasties in the study the procedure was performed after carefully assessing the tone of abdominal muscles. Some of the complications encountered were, post-operative pain was comparatively more in case of patients who underwent herniorrhaphy. But, mesh related infections were encountered in patients who underwent hernioplasty

Table-1 : Number And Age Of Patients Who Underwent Hernioplasty

Age Of The Patients	Number Of Hernioplasties
<20 years	0
21-30 years	4
31-40 years	3
41-50 years	9
51-60 years	11
>60 years	11
Total	38

Out of the 38 patients who underwent hernioplasty 3 patients had infection and mesh extrusion and 7 had inguinodynia.

Table-2 : Number And Age Of Patients Who Underwent Herniorrhaphy

Age Of The Patients	Number Of Herniorrhaphy
<20 years	0
21-30 years	5
31-40 years	2
41-50 years	5
51-60 years	5
>60 years	7
Total	24

Out of the 7 patients aged above 60 years 3 underwent Kuntz repair.

Out of the 24 patients who underwent herniorrhaphy 4 had scrotal swelling and about 9 of the patients had increased post-operative pain compared to patients who underwent hernioplasties.

DISCUSSION

In the present era of minimally invasive surgeries like laparoscopic mesh repair and other recent advance in the field of hernia repair, still in some of the peripheral areas, in rural settings and in economically backward areas still open non mesh hernia repair is the most commonly done procedure and if the patients are selected appropriately after assessing the abdominal muscle tone, the recurrence rate is very minimal and also economical with minimal complications

The Lichtenstein Tension - free Repair

First reported in 1986 this simple operation consists of suturing a patch of polypropylene mesh to the inguinal ligament below, conjoint tendon above and the pubic tubercle and rectus sheath medially. The mesh is split laterally to accommodate the cord; the 'tails' are crossed over and sutured to each other lateral to the cord. A transverse crease incision and not oblique incision is used. Direct sacs are inverted; indirect sacs are dissected upto the neck but are not ligated. They are also simply inverted or excised. Mesh is anchored with a loose continuous suture.

Unlike surgeons who had reserved prosthetic mesh for "difficult" cases Lichtenstein recommends this procedure for all groin hernias. The reported recurrence rate is 0.2 percent in five different centres.

Some of the complications associated with mesh repair are

- Infection.
- Mesh extrusion.
- Foreign body reaction.
- Mesh inguinodynia causing hyperaesthesia and pain along the distribution of ilioinguinal or iliohypogastric nerves.
- Mesh erosion into bladder, bowel or vessels can occur occasionally.

Complications of herniorrhaphy

- Haemorrhage
- Haematoma, seroma
- Infection—1-2%
- Haematocele
- Post-herniorrhaphy hydrocele, lymphocele
- Hyperaesthesia over the medial side of inguinal canal due to injury to iliohypogastric nerve neuralgia (15%)
- Recurrence—10-15%
- Osteitis pubis

- Injury to urinary bladder/bowel
- Testicular atrophy, penile oedema rarely can occur

Laparoscopic Hernia Repairs

Transabdominal Preperitoneal Repair (TAPP): After entering the peritoneal cavity by laparoscopy the preperitoneal space is entered, sac dissected free and reduced. Mesh is used to cover the defect by anchoring it to the Cooper's ligament and conjoint tendon. This is the most commonly performed laparoscopic repair.

Intraperitoneal Onlay Mesh Repair (IPOM): This has largely been abandoned because of complications related to possible mesh erosion into bowel.

Totally Extra-Peritoneal Repair (TEP): The mesh is inserted directly into the preperitoneal space. However, a preliminary diagnostic laparoscopy is done. Scan of current literature shows conflicting reports about the efficacy of TAPP vs TEP. Both the procedures are extensively used all over the world.

The advantages of laparoscopic repair are: -

- Reduced post operative pain and disability
- Inguinal and femoral hernias can be inspected bi-laterally
- Bilateral hernias can be repaired in one sitting
- An unsuspected contralateral hernia can be detected and repaired in the same sitting.
- It avoids the operative site in recurrent hernias

The disadvantages are: -

- Violation of peritoneal cavity
- Need for general anaesthesia
- Cost
- Need for expertise

In this comparative study of herniorrhaphy and hernioplasties patients were evaluated thoroughly with physical examination, routine investigations, and ultrasonography. Patients were selected either for herniorrhaphy or hernioplasty depending on the age of presentation, tone of the abdominal muscles and size of the defect. All the patients were explained about the procedures preoperatively and consent was taken for the surgery

Patients above the age of 50 years with poor abdominal tone were selected for hernioplasties and some of them were selected for herniorrhaphies with orchidectomy (Kuntz procedure) and some for Hamilton Bailey's procedure where in the testis are retained with excision of the cord and complete closure of the deep ring is done.

And those patients below 50 years who had good abdominal tone were selected for herniorrhaphies, and if intraoperatively increased tension was noted along the repair site Tanner's sliding incision (To reduce the tension in the repair area, relaxing incision is placed over the lower rectus sheath so that conjoined tendon is allowed to slide downward) was given and in cases of strangulated hernias, herniorrhaphy was done and not hernioplasty in view of contamination and mesh infection

In this study all the patients who underwent herniorrhaphies and hernioplasties were followed up for a period of 1 year during which no recurrences have been reported. and some of the post operative complications which were encountered for herniorrhaphies were scrotal swelling which was treated with scrotal support and other being increased post operative pain compared to hernioplasties which was treated with analgesics. Inguinodynia (It is chronic inguinal pain seen in post-hernia surgery patients) was seen which was managed conservatively with analgesics.

CONCLUSION

This comparative study shows that after appropriate investigations and clinical examination, patients can be selected either for herniorrhaphy or hernioplasty.In young people with good abdominal tone and with indirect hernia still herniorrhaphy can be considered as an appropriate procedure. It is also cost effective and the risks of mesh repair can be avoided. Whereas in old people or in patients with weak abdominal tone i.e. those with direct hernia, hernioplasty would be the surgery of choice.

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