Material & Methods
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MATERIAL

The present study will be conducted on patients presenting with inguinal hernia and TEP done on then in the emergency or outpatients department of MLB Medical College, Jhansi in the Department of Surgery over 2 years.

Every patient will have a

1) History and Physical examination.

2) Appropriate laboratory studies: Complete Haemogram (Hb, TLC, DLC, ESR), Blood Sugar.

3) Evaluation of genitourinary system urine routine and microscopic, blood urea, serum creatinine.

4) Evaluation of other medical Problems as diabetes, hypertension and tuberculosis.

5) Evaluation of cardiac and respiratory systems – ECG and Chest X-ray if needed.

METHOD

The patient is prepared, anaesthetized (General / Spinal and positioned supine on the operating table. No. pneumoperitoneum is required with this technique but precise access to the extra peritoneal plane and insufflations in this layer is crucial to the repair. In most of cases TEP repair are elective but it can be done one patent with strangulated and incarcerated hernias.
A 2 to 3 cm transverse incision is made below the umbilicus. After blunt dissection of the anterior rectus fascia, it is incised transversely over a distance of 2 cm on the side of the hernia. In the case of bilateral hernia, we choose the side with the larger hernia or the left side in the event of previous appendectomy. Using a small blunt hook, we open the layer between the rectus muscle anteriorly and the posterior rectus fascia posteriorly by displacing the medial margin of the muscle laterally. A lubricated preperitoneal dissection balloon then is inserted into this plane and advanced along the midline to the pubis.

A **blunt trocar** is inserted below the umbilicus and carbon dioxide (CO2) is insufflated to 10 mm Hg. Then a 5-mm trocar is introduced approximately 5 cm below the umbilicus in the midline. Using a 30°C optic. The peritoneal sac is separated from the transverse abdominal muscle inferiorly and posteriorly to the arcuate line.

The **third trocar** in inserted in the midline below the insertion of second trocar. Once the extraperitoneal dissection has reached the chosen site, the trocar is simply inserted under direct vision in usual fashion. A further blunt ended grasper is inserted through this port, to be used for dissection of the groin. Occasionally, fibers passing from the peritoneum to the back of rectus sheath and transversalis fascia need to be divided with scissors. In the distal part of the dissection, similar fibers from back of rectus muscles and transversalis fascia also need to be divided.
Groin dissection

The groin dissection is carried out by tracing the inferior epigastric vessels towards the deep ring. The upper border of an indirect hernial sac is readily recognized lying lateral to the inferior epigastric vessel. A direct sac lies medially.

As the inguinal region is approached, the upper border of indirect sac is identified. The dissection is continued around the sac to encircle the neck. As the dissection continues medially, the vas can be seen, usually closely related to the sac. On the lateral side the vessels are encountered. Under the neck of the sac, care is needed. The external iliac vessels lie between the vas and the testicular vessels at this point. Once the neck has been encircled and the vas and vessels separated, the sac can be divided. The peritoneum is then dissected free of the structures of the posterior abdominal wall, as in the transperitoneal approach. This part of the dissection needs to continue far enough to allow the mesh to lie flat on the posterior abdominal wall.

Mesh insertion

This is the most important part of the repair and occurs after the hernial defect has been dealt with. The patch must cover all potential hernial defects. A mesh size of 6 x 4 or 6 x 6 cm is used for most of the cases. For insertion the mesh is rolled up like a cigarette and inserted through the umbilical 10mm port. It is either anchored with 2 staples to
the back of the Pubic bone below the evel of femoral and in its upper lateral corner above anterior superior iliac spine or no staple in applied.

After insertion of the mesh, the extraperitoneal plane is deflated and the ports removed. The port sites are closed.

One of the major per-operative complication during TEP repair in our study was Pneumoperitoneum which was mainly due to Peritoneal leak or sometime peritoneal tear. The Pneumoperitoneum was decompressed using veress niddle mild peritoneal tear were left as such without suturing.

Complication of Laparoscopic TEP Herniorrphy

- Recurrence
- Complication
  - Seromas / Hematomas
  - Testicular Swelling / Pain
  - Bleeding
  - Wound infection Urinary retension
  - Post operative pain
  - Hydrocele
  - Enterotomy
  - Cyclolomy
  - Neuralgia