

A CASE REPORT ON INGUINAL HERNIATION & ITS IMPLICATION

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Abstract: Inguinal canal is an Musculo-aponeurotic tunnel extent between Deep Inguinal ring to Superficial Inguinal ring. Inguinal hernia occurs in the groin area when fatty or intestinal tissues passes through the inguinal canal. The inguinal canal located at the base of the abdomen where both males and females have an inguinal canal. In men, the testes usually descend through this canal shortly before birth. In women, inguinal canal is location for the uterine ligament or round ligament of uterus. Any hernia in this inguinal canal results in a protruding bulge that may be painful during its movement.

Keywords: Inguinal Canal, Abdomen, Hernia, Direct Hernia, Indirect Hernia.

Introduction: Inguinal canal is an Musculo-aponeurotic tunnel with 4 cms length which is extended between deep inguinal ring to the superficial inguinal ring which is directed downwards, forwards and medially. The peculiarities of inguinal canal in newborns – Inguinal canal is directed almost straight forwards, because muscles of the anterior abdominal wall are not properly differentiated. In females the Inguinal canal is narrower, hence chances of Inguinal Hernia is less. Inguinal hernia is bounded anteriorly by Skin, Superficial fascia, External oblique aponeurosis entirely and partially formed by lateral $1/3^{\text{rd}}$ fleshy fibres of the Internal oblique muscle. Posteriorly bounded by Fascia Transversalis entirely and partially formed by the Medial $1/4^{\text{rd}}$ reflected part of Inguinal Ligament in front of the conjoint tendon also partially formed by the Conjoint Tendon in front of the Fascia transversalis for the medial half. Roof is formed by the Arched fibres of the Internal Oblique & Transversus abdominis muscle and floor is formed by the grooved upper surface of Inguinal ligament & Medially formed by lacunar ligament.

Inlet is formed by deep inguinal ring which is an oval gap in the Fascia transversalis. Structures passing through are spermatic cord or round ligament of uterus enters through the deep inguinal ring. Surface marking for inlet is 1.25 cm above the mid-inguinal point. Outlet of inguinal canal is formed by the superficial inguinal ring which is an oblique triangular flap in the external oblique aponeurosis. Structures passing through are spermatic cord or round ligament of uterus, Ilio-inguinal nerve. Surface Marking for outlet is above & Lateral to Pubic crest.

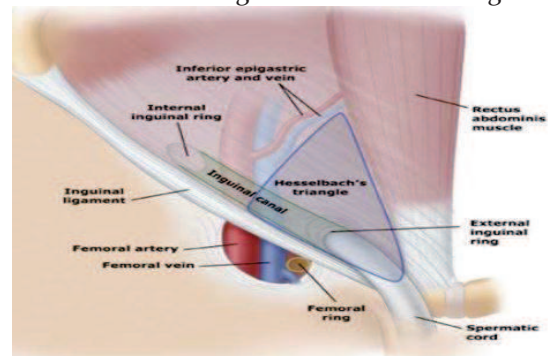
Materials & Methods: Human cadavers, Scalpel, Surgical blades, Surgical gloves, Mask, Cotton, Forceps, Scissors & other stationeries.

Discussion: When the abdominal content covered by a sac of Peritoneum enters the Inguinal canal abnormally, it is known as Inguinal Hernia. The contents of Hernial sac vary from omentum to Large

gut part. Hernia is of two types (a) Oblique Hernia/Indirect Hernia (b) Direct Hernia.

Oblique/Indirect Hernia: Protusion occurs through Deep inguinal ring towards the scrotum called as Indirect Inguinal Hernia which occurs in Infants & Children. The Indirect inguinal herniations are covered by skin, External Spermatic fascia, Cremasteric Fascia, Internal Spermatic Fascia, Extra Peritoneal tissue.

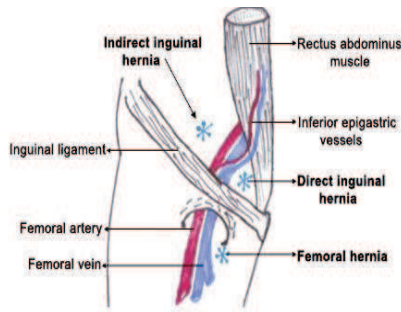
Direct Hernia: Protusion occurs through weak posterior wall of the Inguinal canal towards the scrotum called as Direct Inguinal Hernia which occurs in Adults & Old age people. Direct inguinal hernia occurs through Hesselbach's Triangle.



Hesselbach's Triangle divides the Direct Hernia into Medial Direct Inguinal hernia & Lateral Direct Inguinal hernia by the passage of Obliterated Umbilical Artery. The boundaries of Hesselbach's Triangle are bounded medially by lateral border of rectus abdominis, laterally by inferior epigastric artery, base is formed by inguinal ligament.

Medial Direct Hernia is bounded medially by obliterated umbilical artery, laterally by lateral border of rectus abdominis, base is formed by inguinal ligament.

Lateral Direct Hernia is bounded medially by obliterated umbilical artery, laterally by inferior epigastric artery, base is formed by inguinal ligament.



Coverings Of Medial Direct Hernia	Coverings Of Lateral Direct Hernia
Skin	Skin
External Spermatic fascia	External Spermatic fascia
Conjoint Tendon	Cremastric fascia
Fascia Transversalis	Fascia Transversalis
Extra Peritoneal tissue	Extra Peritoneal tissue

In our study we had reported with Direct Inguinal herniation and sub-classified as Lateral Direct Inguinal hernia. With Large amount of small Intestines & small amount of Large Intestines especially we found appendix is observed which has deviated its normal anatomy.

1. Inguinal Herniation



2. Inguinal Herniation



3. Coils Of Intestines

4. Herniated Appendix



Signs & Symptoms of Lateral direct Inguinal herniation: Symptoms of Inguinal Hernia: Herniation causes bulges along the pubic region or groin region which can increase in size when the patient stands up or coughs. This type of hernia may be painful or sensitive to touch and pain during coughing, exercising, or bending. Others symptoms such as burning sensations, swelling of the scrotum in men.

Risk factors includes: personal history of hernias, being male, premature birth, Heredity, being overweight or obese, chronic cough, frequent constipation, pregnancy, cystic fibrosis, frequently standing for long periods of time.

Conclusion: Inguinal hernias can be either indirect or direct. An indirect inguinal hernia is the most common type. It often occurs in premature births, before the inguinal canal can fully develop. However, this type of hernia can occur at any time during life time. This condition is most common in males. A direct inguinal hernia most often occurs in adults. Mainly weakening of muscles during adulthood lead to a direct inguinal hernia. Inguinal hernias can also be incarcerated or strangulated. An incarcerated inguinal hernia happens when tissue becomes stuck in the groin and can't go back. Strangulated versions are more serious medical conditions that restrict blood flow to the small intestine. Strangulated

hernias are life-threatening and require emergency medical care.

Treating Inguinal Hernias: Surgery is the primary treatment for inguinal hernias. It's a very common operation and a highly successful procedure done by

("open" repair) or laparoscopic surgery (done through a small scope). Laparoscopy uses several short incisions rather than a single, longer incision. This surgery may be preferable if you want a shorter recovery time.

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