

# Direct Left Inguinal Hernia in A 75-Year-Old Female: A Case Report

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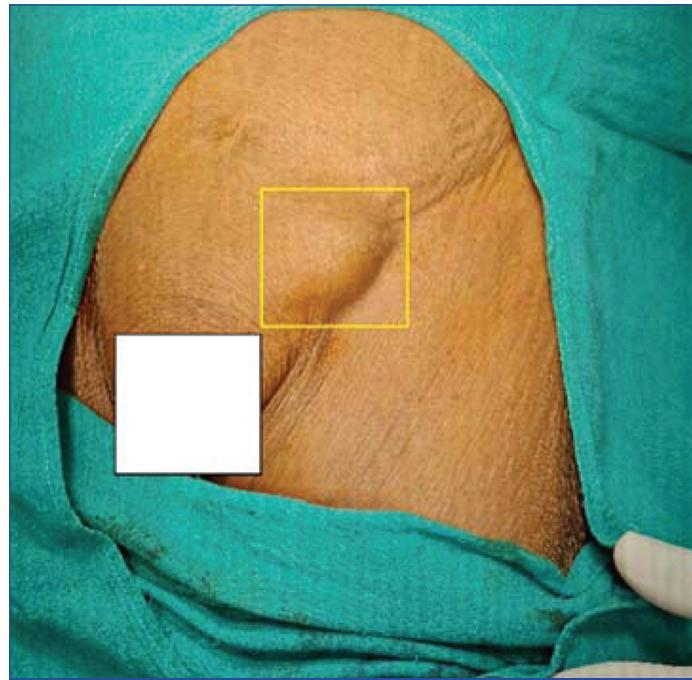
## ABSTRACT

Inguinal hernia is rare in females compared with males. The hernia can be classified into two types: Direct and indirect. The typical clinical presentation of an inguinal hernia in elderly females includes groin pain or discomfort during physical activity, swelling in the groin area, and discolouration of the skin over the hernia. This is a case of a direct left inguinal hernia in a 75-year-old female. The patient observed a swelling in her left groin area, which was associated with pain that was progressive in nature. The patient was successfully managed with Lichtenstein tension-free meshplasty. Timely diagnosis and management are recommended in females with inguinal hernia to prevent associated adverse outcomes.

**Keywords:** Deep ring occlusion, Inguinal swelling, Lichtenstein, Mesh repair, Meshplasty

## CASE REPORT

A 75-year-old female patient, a homemaker with newly diagnosed diabetes mellitus, presented with complaints of swelling over the left inguinal region for six months, which was insidious in onset and gradually progressive in size and had reached the current size of approximately 4.0×3.0 centimetres [Table/Fig-1]. The patient was on regular medications for diabetes mellitus for the last two weeks.



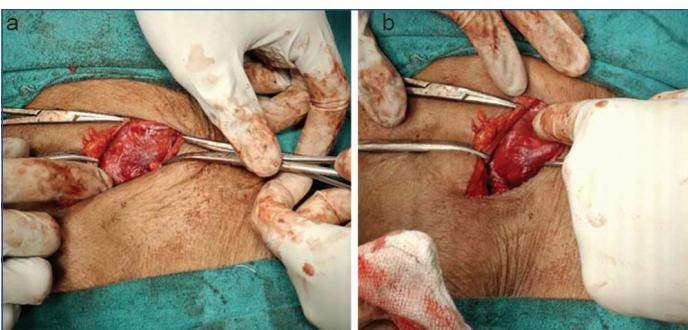
[Table/Fig-1]: Clinical image of the left inguinal swelling.

The swelling was aggravated by straining and was relieved by lying down [Table/Fig-2]. She had no history of chronic cough, long-term constipation, heavy weight lifting, or any symptoms of an increase in intra-abdominal pressure. There was no history suggestive of irreducibility and intestinal obstruction. General examination of the patient was normal, with vitals including a heart rate of 81 beats/minute in the right radial artery, normal volume, regular rhythm, no radio-radial or radio-femoral delay, and blood pressure of 120/80 mmHg and afebrile temperature. Local examination showed normal right-sided inguinal examination, and the left-sided inguinal region showed a globular-shaped swelling of size 4.0×3.0 centimetres in

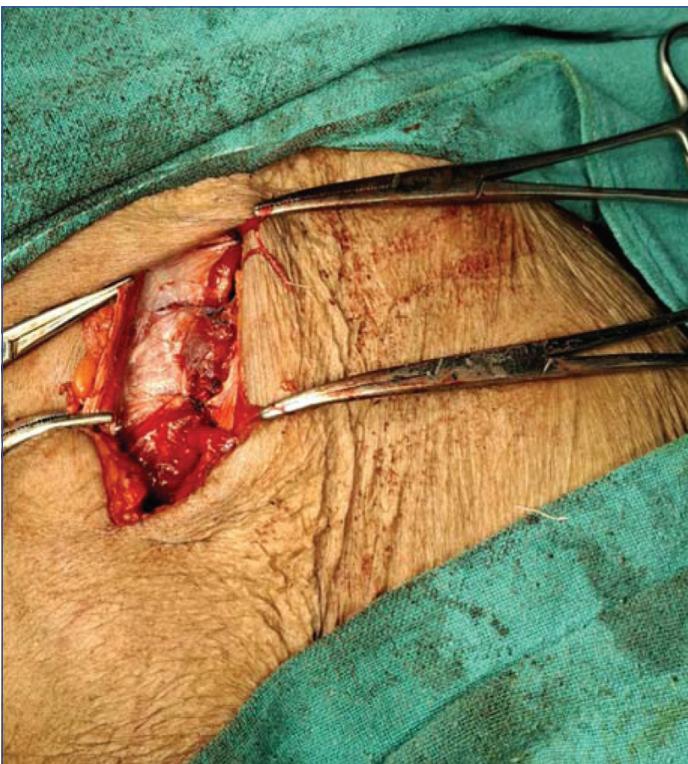
vertical-horizontal direction extending from the mid-inguinal region up to the genitalia located above and medial to the pubic tubercle. The swelling had a soft, elastic consistency, ill-defined borders, a smooth surface, no scars or dripping sinuses, normal-appearing skin, and no visible peristalsis. On coughing, an expulsive cough impulse was observed over the swelling. There was no local rise of temperature or tenderness overlying the swelling. The deep ring occlusion test was positive. External genital examination was normal, along with other orifices of the hernia observed as usual. Intraoperative findings showed a left direct uncomplicated inguinal hernia with bowel as its content. There was no evidence of any indirect component, and a cord lipoma was visualised. The patient was managed surgically by a 4-centimetre incision taken 1.5 cm above the midpoint of the line joining the left pubic tubercle and left anterior superior iliac spine. External Oblique Aponeurosis (EOA) was identified, a stab incision was taken over the EOA, and an incision was extended medially towards the superficial ring and laterally extended till the deep ring [Table/Fig-3,4].



[Table/Fig-2]: Inguinal swelling in relaxed lying position.



[Table/Fig-3]: a,b) showing a hernia protruding out-medial to the epigastric vessel direct hernia.



[Table/Fig-4]: Intraoperative image showing posterior wall repair.

Pubic tubercle identified, cord lifted, sac identified and confirmed to be medial to the inferior epigastric vessel. These features were suggestive of a left direct inguinal hernia. The content was extracted, and posterior wall repair was performed using vicryl 2-0 Round-Bodied (RB) needle in a double-layer closure. The adhered cord lipoma was dissected, and the excess round ligament was excised. Prolene mesh was placed, and Lichtenstein tension-free meshplasty was completed uneventfully. A check dress was performed on Postoperative Day (POD) 3, and the suture line was found to be healthy, with no soakage or gape. The patient was discharged on POD-6 with sutures in situ. The patient was followed up on 15, 30 and 60 days for complications such as seroma/haematoma, neural complications, intestinal obstruction, mesh-related complications, inguinodynia, recurrence and further follow-up showed no long-term complications.

## DISCUSSION

An inguinal hernia can be characterised as the oozing out of the abdominal contents or preperitoneal tissue components through the inguinal canal in the front abdominal wall [1]. Inguinal hernias are the most common, accounting for 75% of all abdominal wall hernias, and inguinal hernia repair is among the most common elective surgeries performed in surgical practice. Physical examination can be adequate for diagnosing hernias, though ultrasound imaging can help confirm the diagnosis. When ultrasound findings are ambiguous, a Computed Tomography (CT) scan can be used to confirm the diagnosis [2].

Direct inguinal hernias emerge medially through the inguinal triangle (Hesselbach's triangle), bordered by inferior epigastric vessels superolaterally and the inguinal ligament below. Conversely, an indirect inguinal hernia passes through the deep inguinal ring from the lateral side to the inferior epigastric vessels [3]. The male-to-female incidence ratio is reported as 6:1, with males predominating. In females, inguinal hernias are predominantly right-sided, with 68% on the right, 28% on the left, and 8.5% bilaterally [3]. A female inguinal hernia is congenital and may go unnoticed until old age or complications arise. It has also been associated with a higher risk amongst those with two or more parities [4,5]. This 75-year-old female had a direct inguinal hernia. The development of inguinal hernia in elderly females has been associated with chronic constipation, loss of abdominal wall strength or an increase in the intra-abdominal pressure [3,6]. Inguinal hernia can be a diagnostic challenge due to overlapping clinical presentations with hydrocele and inguinal canal endometriosis. The clinical manifestations of the hydrocele of the canal of Nuck are very similar to those of an inguinal hernia. It is manifested as a mass from the inguinal region to the labia. The mass increases when standing or increasing abdominal pressure and the signs are similar to an inguinal hernia [7]. On the contrary, inguinal canal endometriosis typically presents as a groin lump or pain that is worse with menstruation [8]. Diagnosis in males usually does not require imaging. However, it is often required in females and might be helpful in recurrent hernia, surgical complications after repair and ruling out other causes of groin pain [9].

The published literature supports early intervention, which can be helpful in the management of these cases. An 81-year-old female presenting with bilateral symptomatic inguinal hernia was managed successfully by laparoscopic repair [6]. Another case of a 76-year-old female had acute strangulation due to a hernia, mostly due to chronic abdominal straining was also managed by open repair without bowel resection, with positive outcomes [10]. This underscores the importance of early intervention, which might be helpful in the prevention of acute outcomes such as strangulation and involvement of pelvic organs in elderly females. Age-related comorbidities and associated factors responsible for the increase in intra-abdominal pressure have been marked as prominent risks for inguinal hernia in this age cohort and a heightened clinical vigilance is recommended [3,11].

If left untreated, an inguinal hernia can grow and cause severe impairment of everyday activities [12]. The standard Lichtenstein repair for inguinal hernia is an effective and simple method [13]. In female patients, haematoma occurrence in the greater labia might occur. The major postoperative complications include intra-abdominal hypertension followed by abdominal compartment syndrome, cardiorespiratory complications, and the need for elective postoperative ventilation [1,13]. The recurrence rate of meshplasty is 0.5-15%, making it the preferred method of management, even in females [14]. Differential diagnoses to consider include a femoral hernia, lymphadenopathy, lipoma, a femoral artery aneurysm, a psoas abscess, or a hydrocele, which can be ruled out with radiological modalities such as ultrasound, CT, and MRI. The differentials considered in this case were: 1) femoral hernia; 2) lymphadenopathy; and 3) lipoma. Early diagnosis and timely intervention can be helpful to avoid adverse outcomes such as incarceration and strangulation.

## CONCLUSION(S)

Inguinal hernioplasty is one of the most common surgeries taking place all over the world, with a rare occurrence of such surgeries in females. This case highlights the effective surgical management of a left inguinal hernia in a female patient. Early intervention can prevent further complications from the hernia.

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