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Giant Irreducible Inguinal Hernia With Omental Involvement In A Young Adult: A Case Report

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Abstract:
Giant inguinal hernias pose a significant challenge in surgical management, particularly when complicated by irreducibility and omental involvement.[2] We present a case of a 26-year-old male with a giant irreducible inguinal hernia containing 1.23 kg of omentum, successfully managed with surgical exploration, omentectomy, herniotomy, and modified Bassini's repair with meshplasty. The procedure was performed with minimal blood loss and short operative time, resulting in rapid postoperative recovery and discharge.

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I. Introduction:

Inguinal hernias are a common pathology where contents from the peritoneal cavity migrate inferiorly towards the inguinal canal.[1] Giant inguinal hernias are quite uncommon and characterized by large protrusions of intra-abdominal contents into the inguinal canal, often extending into the scrotum and causing significant morbidity.[2] Surgical management of giant inguinal hernias can be challenging, especially when complicated by irreducibility and involvement of vital structures such as the omentum.[3] Herein, we report a case of a giant irreducible inguinal hernia with omental involvement in a young adult and describe the successful surgical approach used for its management.

II. Case Presentation:

A 26-year-old male was brought to the clinic with complaints of a progressively enlarging mass in the right inguinal region for the past two years. He reported intermittent episodes of pain and discomfort associated with the mass, which had become irreducible over the past month. The patient was afebrile and had no significant past medical history. Abdominal examination revealed a large, non-tender, irreducible mass extending from the right inguinal region into the scrotum was palpable. The overlying skin was intact, with no signs of inflammation or skin changes.

Diagnostic imaging, including ultrasound and computed tomography (CT) scan of the abdomen and pelvis, confirmed the presence of a giant inguinal hernia containing a significant amount of omental fat. Laboratory investigations were unremarkable, and the patient was optimized for surgical intervention.

Surgical Procedure:

The patient was taken to the operating room, and under general anesthesia, an inguinal incision was made over the right inguinal region. Upon exploration, a large hernia sac containing approximately 1.23 kg of omentum was identified. The omentum was carefully dissected and excised from the hernia sac, and a herniotomy was performed to release any entrapped bowel loops.

A modified Bassini's repair technique was then employed to reconstruct the inguinal canal, reinforcing the repair with meshplasty to minimize the risk of recurrence. The procedure was completed with meticulous hemostasis, and the wound was closed in layers.

Fig 1: Large Omentocoele

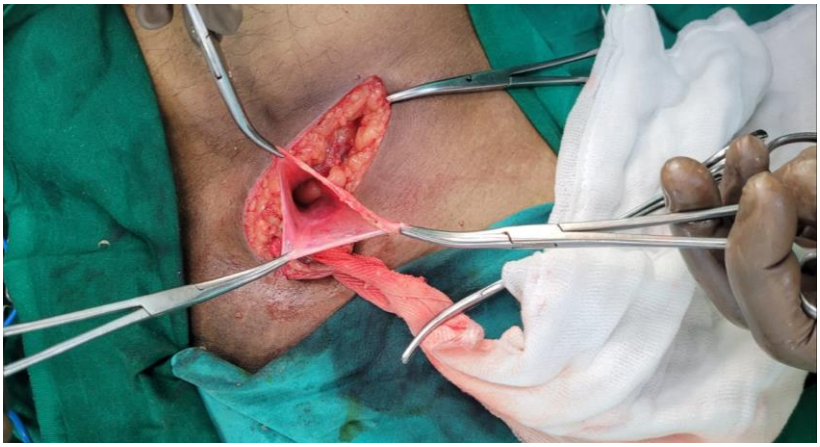

Fig. 2 : Hernial Sac

Fig. 3: Hernia Sac

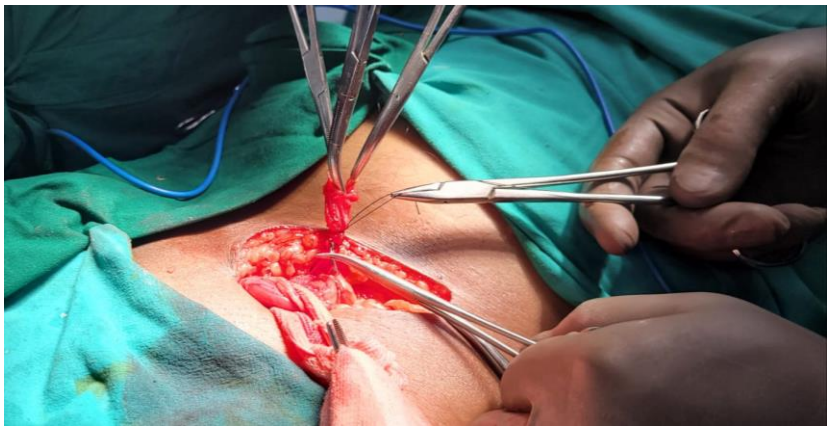

Fig. 4: Transfixation and Ligation of Sac

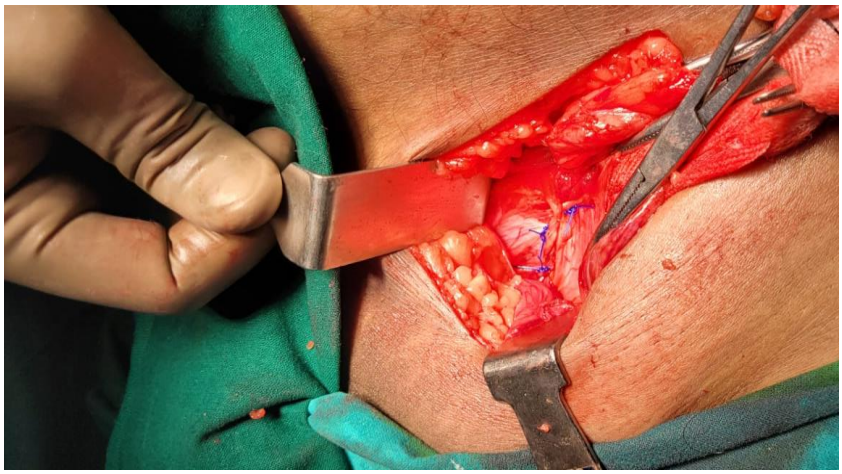

Fig. 5: Modified Bassisni's Repair

Fig. 6: Meshoplasty

Fig. 7: Final Scar (Wound Closure)

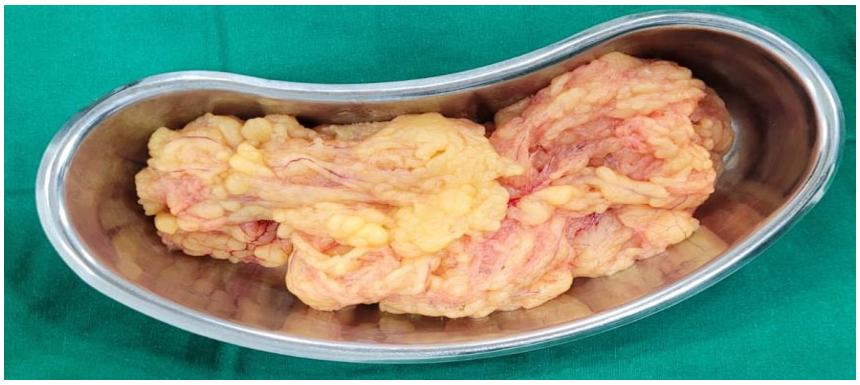

Fig. 8: 1.23 Kg Omentum Excised From The Hernia Sac

Outcome:

The total operative time was 39 minutes, with minimal blood loss (<2 cc). The patient tolerated the procedure well and was extubated in the operating room. Postoperative recovery was uneventful, with resolution of pain and restoration of normal bowel function. The patient was discharged home on the first postoperative day with instructions for wound care and follow-up.

III. Discussion:

Inguinal hernias are a common disease, and the patients may present to the surgical department for incarceration. Giant hernia is defined as a hernia that extends below the midpoint of the thigh while standing.[4] A number of intra abdominal organs have been reported in giant inguinal hernias including the appendix, bladder, small and large bowel, stomach, and ovaries.[5] The presented case illustrates the complexities and challenges associated with giant inguinal hernias, particularly when complicated by irreducibility and involvement of the omentum. This case underscores the critical role of diagnostic imaging, including ultrasound[6] and computed tomography,[7] in confirming the diagnosis and assessing the extent of hernia sac contents preoperatively.

Surgical management of such cases requires a comprehensive approach, as demonstrated by the successful execution of inguinal hernia exploration,[6,7] omentectomy,[8] herniotomy, and modified Bassini's repair with meshplasty.[9] The utilization of a modified Bassini's repair technique with meshoplasty highlights the importance of reinforcing the repair to minimize the risk of recurrence, especially in cases involving large hernia defects.[9] Importantly, the remarkably short operative time of 39 minutes and minimal blood loss of less than 2 cc further accentuate the efficiency and safety of the chosen surgical approach.The favorable postoperative outcomes, including rapid recovery and early discharge, underscore the effectiveness of timely intervention and meticulous surgical technique in achieving optimal patient outcomes.

This case emphasizes the necessity of a multidisciplinary approach, involving surgeons, anesthesiologists, and radiologists, in the management of complex inguinal hernias, thereby contributing to improved patient care and outcomes.[10] Continued research and experience with similar cases will further inform and refine best practices for the management of giant inguinal hernias.

IV. Conclusion:

Giant irreducible inguinal hernias with omental involvement represent a rare but challenging surgical condition. Prompt recognition and appropriate surgical intervention are essential for optimal outcomes. In our case, surgical exploration, omentectomy, herniotomy, and modified Bassini's repair with meshplasty resulted in successful management of the hernia with minimal morbidity and rapid recovery. This case highlights the importance of a multidisciplinary approach and meticulous surgical technique in the management of complex inguinal hernias.

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