

CASE REPORT

Giant Inguinal Hernia- Scrotal Abdomen: A Case Report & Review of Literature

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Abstract:

In a developing country like India, due to lack of awareness patients don't seek medical attention, which lead to gradual enlargement evolving into such giant hernia. Usual content is intestines, sometimes the entire mesenteric small bowel, the entire colon and omentum, even bladder, stomach may be present. Giant inguinal hernia post a challenging problem for the surgeons with various methods to manage the patient. Treatment should be individualized and planned well before surgery, anticipating complications and managing the co-morbidities. Surgery can be en-mass reduction of contents or abdominal content de-bulking or abdominal wall extension with mesh & tissue flaps. The selection of type of management depends largely on patient's symptoms, comorbidities, cardio-pulmonary status, availability of facilities and surgical expertise.

Key Words: Hernia, Gradual Enlargement, Abdominal Wall Extension.

Introduction:

Giant inguinoscrotal hernia is uncommon. They are defined as herniae extending below midpoint of the inner thigh in the standing position, and if associated with loss of abdominal domain they are known as scrotal abdomen [1].

In a developing country like India, due to lack of awareness patients don't seek medical attention, which lead to gradual enlargement evolving into such giant hernia. Usual content is intestines, sometimes the entire mesenteric small bowel, the entire colon and omentum, even bladder, stomach may be present. In 2001 Walgenbach et al. reported a case of gastric rupture in context with a giant left inguino-scrotal hernia [2]. They usually present with significant negative impacts to patient's quality of life including restriction in mobility as walking, sitting, lying down and voiding may become extremely difficult for the patient. They may present with retention of urine as the scrotum tightens around the penis. Bowel obstruction and scrotal skin trophic ulceration may also occur. They

may also develop fatal tissue expansion of vascular pedicles. On the other hand reduction of hernial contents may produce alterations in intra-abdominal and intra-thoracic pressures; leads to cardiac or respiratory failure (abdominal compartment syndrome). The risk of wound dehiscence and recurrence of hernia (up to 30%) is also greater with forced closure of such giant hernia [3]. Proper planning and post-operative care needed for management of these types of hernia.

Case Report:

A 63 year old male patient, a known hypertensive, came with history of swelling of the right inguino-scrotal region for ten years, insidious in onset, gradually progressing. The swelling was associated with difficulty in walking. There was no history suggestive of intestinal obstruction, difficulty in passing urine or chronic cough.

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How to cite this article:

Deepak G. Udupudi, Arun Prasad. D & Ahemadi Firdous Nikhat : Giant Inguinal Hernia- Scrotal Abdomen: A Case Report & Review of Literature. International Journal of current Medical and Applied sciences; 2016, 12(3),163-165.

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Figure 1- Large Right Inguinal Hernia

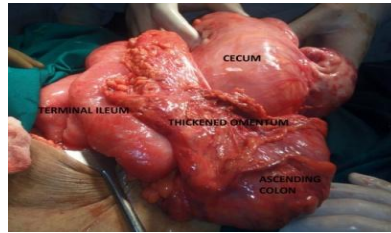


Figure 2- Contents of Hernia

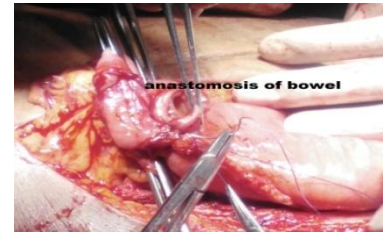


Figure 3: Ileo-Transverse Anastomosis



Figure 4: Herniorrhaphy



Figure 4: Resected Specimen



Figure 6: Post Operative Picture of Patient

On general physical examination, patient was pale, pulse rate 80 per min & BP was 150/100 mm Hg. On local examination, large inguino-scrotal hernia noted in right side which was descending up to knee joint in standing position (fig-1). Cough impulse was present. On palpation, bowel loops were palpable and swelling was not reducible, but there were no signs of intestinal obstruction. Right testis was not palpable. Left side inguinal canal was normal and left testis was palpable in the scrotum. Systemic examination was normal. The patient was evaluated with pre-operative investigations. USG abdomen showed right sided inguinal hernia. USG scrotum was showing hydrocele with atrophic right testis, bowel loops & omentum as content of hernia sac in scrotum. Chest X-ray PA view was normal and 2D ECHO showed concentric LVH. Patient was also found to be anemic with Hb – 6.9 g/dl, for which 4 pints of blood transfusion was done pre-operatively. Renal function tests, liver function tests and serum electrolytes were normal. Pre-operatively patient was given chest physiotherapy. After controlling his blood pressure with anti-hypertensives, patient was counselled about risks & also explained about the need for mesh repair of abdominal wall to prevent abdominal compartment syndrome and consent for surgery was obtained. Patient was planned for right inguinal hernioplasty, small/large bowel resection & reduction scrotoplasty. Under spinal anesthesia, right inguinal skin crease transverse incision was made & external oblique aponeurosis flaps were raised.

The contents could not be reduced. Hence, a scrotal incision was made & the sac was opened. Terminal ileum, caecum, appendix, ascending colon, transverse colon & their thickened mesentery & omentum were found to be the contents. They were adherent to each other forming a large entangled mass (fig-2). Then, we decided to do right hemicolectomy. As the mesentery was much thickened, for the safety of dealing with the vascular pedicles, a right Para median incision was made, after the patient was converted to general anesthesia by endotracheal intubation. Vascular pedicles of Terminal ileum, caecum, ascending colon & proximal transverse colon were ligated & right hemicolectomy was done. The ends of terminal ileum & transverse colon were taken back in to abdomen. After achieving a complete hemostasis, ileo-transverse colon end-end anastomosis was done. Peritoneal tube drain was placed & abdomen was closed in layers. Right testis was found to be atrophic. Hence right orchidectomy along with excision of the cord up to internal ring was done. Double layer darning herniorrhaphy (fig-4) was done. No mesh was placed as the entire cord was excised. Subtotal excision of scrotum & scrotoplasty was performed. One pint of blood transfusion was done per operatively. Patient was shifted to ICU for elective ventilation & was extubated after 24 hours. The patient recovered uneventfully. Drain was removed on POD4. He was discharged on POD 8. Follow up of patient for 6 months has been uneventful.

Discussion:

Scrotal abdomen defined as a large hernia extending below midpoint of the inner thigh in the standing position associated with the loss of abdominal domain. There are few surgical techniques described in the literature for repairing of such giant inguinoscrotal herniae. One of the techniques requires frequent insufflations of air into the abdominal cavity to create space to accommodate herniated viscera and facilitate fascial repair with minimal tension. Laparoscopic separation has been told by Hamad et al. in 2013 to increase the capacity of the abdominal cavity to facilitate closure and reduce postoperative complications in patients who had loss of abdominal domain [5]. Merret et al. (2009) advocated a technique for giant inguinal hernia involving the reduction of hernia, the repair of hernial orifices with Marlex mesh and the creation of a midline abdominal wall defect to increase the intra-abdominal capacity followed by covering this defect with Marlex mesh with a rotation flap of inguinoscrotal skin [6]. Lichtenstein technique has also been advocated by Bierca et al. in 2013 for repair of giant inguinal hernia [7]. Surgical treatment in complicated cases may require debulking the contents of the hernial sac by performing a right hemicolectomy and a small bowel resection and reconstruction of the abdominal wall using Marlex mesh and a tensor fasciae latae flap as reported by Mehendal et al. in 2000 [8]. Right hemicolectomy with Lichtenstein's hernioplasty was done by Santanu Sarkar et al [9].

In present case, we did right hemicolectomy which debulked the bowel volume in abdominal cavity. Resection of the bowel aided in reducing the intra-abdominal pressure and avoiding the subsequent complications associated with it like abdominal compartment syndrome and closed the abdomen with delayed absorbable sutures.

Conclusion:

Giant inguinal hernia poses a challenging problem for the surgeons with various methods to manage the patient. Treatment should be individualized and planned well before surgery, anticipating complications and managing the co-morbidities. Surgery can be *en-mass* reduction of contents or abdominal content de-bulking or abdominal wall extension with mesh & tissue flaps. The selection of type of management depends largely on patient's symptoms, co-morbidities, cardio-pulmonary status, availability of facilities and surgical expertise.

References:

1. Hodgkinson DJ, McIlraith DC. Scrotal reconstruction for giant inguinal herniae. *Surg Clin North Am* 1984; 64: 307-13.
2. Walgenbach KJ, Lauschke H, Brünagel G & Hirner A. An Uncommon Form of Gastric Rupture in Giant Scrotal Hernia, *Zentralblatt für Chirurgie*; 2001; 126(12):1015-7.
3. Stoppa RE. The treatment of complicated groin and incisional herniae. *World J Surg* 1989;13:545-5
4. Willis S, Schumpelick V. Use of progressive pneumoperitoneum in the repair of giant hernia. *Hernia* 2000; 4: 105-11
5. Hamad, A., Marimuthu, K., Mothe, B. & Hanafy, M. Repair of Massive Inguinal Hernia with Loss of Abdominal Domain Using Laparoscopic Component Separation Technique, *Journal of Surgical Case Reports* 2013; 2013(3):008.
6. Merrett ND, Waterworth MW, Green MF. Repair of giant inguinoscrotal hernia using marlex mesh and scrotal skin flaps. *Aust N Z J Surg* 1994; 64: 380-3.
7. Bierca, J., Kosim, A., Małgorzata, K., Zmora, J. & Kultys, E. : Effectiveness of Lichtenstein Repairs in Planned Treatment of Giant Inguinal Hernia- Own Experience, *Video surgery Miniinv*; 2013; 8 (1): 36-42.
8. Mehendal FV, Taams KO, Kingsnorth AN. Repair of a giant one inguinoscrotal Hernia. *British Journal of Plastic Surgery* 2000; 53(6):525-9.
9. Santanu Sarkar et al. Case report Scrotal abdomen revisited: A case report and review of literature. *SEAJCRR* 2014, Nov-Dec, 3(6), 1135.

Conflict of interest: None declared
No source of funding.