Strangulated Inguinal Hernia: an Unusual Presentation

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Introduction

The incidence of hernia is estimated to be 3 percent.[1] Hernia repair is one of the most common elective procedures in general surgery today, with an estimated 700,000 inguinal herniorhaphies performed annually in United Stated alone.[2] Groin herniorhaphies both elective and emergency are the most common operations performed by the general surgeon.[3] A bulge in the groin situated above and lateral to pubic tubercie is the usual presentation which can become irreducible leading to incarceration and strangulation. Long standing large inguinoscrotal hernias may produce necrosis of scrotal skin due to pressure.[4]
We present a patient of long standing neglected inguinoscrotal hernia presenting in the emergency with necrosis of hernia sac and scrotal skin leading to protrusion of gangrenous small intestine. Patient was operated upon after active resuscitation. Resection and end to end anastómosis of the small intestine midline celiotomy and Bassini's repair of the hernia was performed. Patient made a delayed but full post operative recovery.

Case Report

A 60 years old man was brought to the casualty of PIMS (Pakistan Institute of Medical Sciences Islamabad) with history of foul smell emanating from the patient who was living alone in a small house. He was picked up by his neighbor as he was not seen out of his house for the last few days. At the time of presentation he was severely dehydrated, and was not responding to vocal command making communication extremely difficult. Physical examination revealed a heart rate of 130 per minute with low volume thready pulse, and the blood pressure was 60/40 mm of Hg. He was resuscitated with intravenous fluids. Further examination revealed that almost whole of the small intestine was lying out of the peritoneal cavity over the upper anteromedial part of the left thigh and most of it was gangrenous. It was coming out of the necrosed scrotal skin from the left side.
A diagnosis of strangulated hernia with scrotal skin necrosis and protrusion of gangrenous small intestine was made and immediate surgery was planned.
At operation there was a large area of scrotal skin necrosis with small intestine protruding out. The gut was gangrenous and was covered with slough. The gut could be traced to the inguinal canal.
A midline celiotomy was performed and resection of the gangrenous segment of small intestine (about 17 feet) followed by single layer end-to-end anastomosis was carried out. The remaining gut consisted of six feet (proximal segment) and two feet of ileum distal to the anastomosis. Hernia repair was done by Bassini's technique and abdominal incision

was closed in single layer.
Postoperatively patient required ventilatory support for which he was shifted to the intensive care unit. Postoperative period was complicated by abdominal wound infection requiring prolonged 1/V antibiotics and repeated change of dressings. Scrotal wound was left open after debridement to heal by secondary intention. Patient was tolerating oral liquids and semisolids while in the hospital and was discharged on oral elemental diet on 11th postoperative day. Post-operative follow-up showed no signs of malnutrition, so total parenteral nutrition was not instituted.

Discussion

A hernia is a protrusion of normal cavity contents through the fascial and muscular layers designed to contain them. The inguinal hernia results due to failure of various layers of abdominal wall to contain enclosed viscera. Most common complaint in nearly all the patients, is the appearance of a lump in the groin. Sometimes, there is a dragging sensation or pain in the groin. In the beginning the hernia reduces itself after appearing on coughing straining or standing.
Complications may develop in groin hernias, such as irreducibility and obstruction, with or without strangulation and may convert an easily treatable condition into a life-threatening emergency. Identification of risk factors that may predict complications would help place the patient in a high-risk group. Early admission and surgery in such patients is associated with significant reduction in mortality and morbidity.[5]
Inguinal hernia may become irreducible and produce intestinal obstruction but strangulation is the most feared complication requiring urgent surgical intervention. Strangulation occurs due to impairment of the blood supply, which if partial, leads to venous congestion and produces gangrene in cases of complete occlusion. Inguinal hernias are more common, but it is femoral hernia, which is more prone to strangulation. The incidence of strangulation in inguinal hernia is up to 5%[6] The risk factors shown to be useful in predicting complications in an adult population are age (old age group), duration of hernia (short), type (femoral) and co-existing medical illnesses.[5-7]
The exact precipitating cause of obstruction and strangulation is unknown but some events like straining coughing or sneezing may force the contents into the sac, which are gripped at the neck of the sac by the deep ring. The contents are swollen due to venous congestion with exudation of blood stained fluid. Swelling and venous congestion impairs arterial supply and gangrene ensues within[4-6] hours. Neglected cases may develop localized sepsis due to gut perforation, followed by generalized septicemia.
Longstanding large inguino-scrotal hernias are more common in the sliding variety of hernias. Neglected cases (patients of nursing homes, hospices and psychiatric wards) may develop necrosis of overlying skin. Sometimes the sac also sloughs off resulting in the intestinal protrusion through the defect.
In our patient, most of the small intestine (gangrenous) was protruding out of the sac and was seen lying in front of upper thigh. The gut was gangrenous due to arterial and venous occlusion at the level of the deep ring.
This man was an old psychiatric patient, living alone and brought in obvious systemic sepsis. The most common reason for intestinal perforation is necrosis at the ante mesenteric border due to vascular compromise. But in large inguino-scrotal hernia, direct

trauma can also cause perforation.[8]
It is recommended to perform standard laparotomy in strangulated inguinal hernia, as proper resection of the gut after identifying the vessels, is only possible through abdominal incision.[9]
Intestinal resection and anastomosis was performed through midline celiotomy and Bassini's repair was performed for hernia, scrotal wound was packed after debridement. Post operatively, patient made slow but steady recovery.
In the revolutionized era of surgery and anesthesia such a case is rarely seen. Although conservative treatment may be instituted in a frail old patient but the dreaded complication of strangulation and gangrene makes it a less desired option to such an extent that some countries have adopted the policy of operating all hernias.[10]
Elective hernia repair in frail and elderly patients, even those on continuous ambulatory dialysis, have been shown to be associated with less mortality as compared to conservative treatment.[11]
So all patients with hernias need special attention regarding risks for strangulation and should be admitted and operated on priority to prevent morbidity and mortality anastomosis associated with the resection of gangrenous gut and anastomosis.

References

1.Lichtenstein IL. Hernia repair without disability. 2nd ed.St Louis, Mo: ishlyaku Euroamerica Inc; 1986, chap.2.
2.Rutkow IM.Surgical operations in the United States; then (1983) and now (1994). Arch Surg 1997; 2:113-29.
3.Kingsworth A. Bennet DH. Hernias, Umbilicus: abdominal wall. In: Russell RCG, Williams NS, Bulstrode CJK (eds). Bailey and Love Short Practice of Surgery 23rd ed. London: Arnold, 2000 p. 1149.
4.Giles GR, Halasz NA. The Abdominal Wall and Hernias. In: Cuschieri A, Giles GR, Moossa AR(eds). Essential Surgical Practice 3rd ed. London: Butterworth-Heinernann, 1995, p. 1445.
5.Rai S, Chandre SS, Smile SR. A study of the risk of strangulation and obstruction in groin hernias. Aust NZJ Surg 1998;68:650-4.
6.Uppot RN, Ghey VK, Gupta R, et at. Intestinal perforation from blunt trauma to inguinal hernia. Am J Roentgenol 2000;174:1538.
7.Chaloner EJ. Deineuvilie J. External strangulation of the small bowel following injury to inguino-scrotal hernia. Injury 1997;28:69-70.
8.Horban VR, Merliuk VO, Arsenink VV, et at. Strangulated intramural ingtiinal hernia. Kiln Khir 1998;3:53.
9.Devlin HB. Inguinal hernia in adults. In: Dudley H (ed) Rob and Smith operative surgery 4th ed. London: Butterworth-Heinemann, 1983, p. 465.
10. Millat B. Treatment of inguinal hernia. Rer Prat 1997,47:268-72.
11. Morris-Stiff GJ, Bowrey DJ, Jurewicz WA, et at. Management of inguinal hernia in patients on continuous ambulatory peritoneal dialysis: an audit current UK practice. Postgrad Med J 1998;74:669-70.