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## CASE REPORT

# Scrotal Enterocutaneous Fistula: A dilemma of Long-Standing untreated Inguinal Hernia

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## SUMMARY

In surgical practice inguinal hernias are a common patient presentation. Though access to surgical intervention for inguinal hernia is readily available in hospitals, lack of awareness and patient negligence leads to not seeking prompt treatment until severe symptoms appear. This is a description of a case of a 70-year-old man with long standing inguinal hernia since the past 10 years with no history of previous clinical management. The patient presented with an entero-scrotal fistula which occurred spontaneously and sought medical opinion after 6 months of developing it, when repeated faecal discharge began. This is a rare complication of underlying inguinoscrotal swelling which has been long-standing in nature. An exploratory laparotomy was performed on this patient with resection of the perforated small bowel. Purse-string suture was taken at the deep inguinal ring and end-to-end anastomosis of the ileal segment was done. There were no post-operative complications and the patient recovered without any significant impedence.

**Keywords:** long-standing direct inguinal hernia; entero-scrotal fistula; delayed presentation;

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## INTRODUCTION

Globally, inguinal hernias are not only one of the most common surgical complaints but also one of the most done elective repair surgeries. Hernias are more commonly seen in men in comparison to women. According to estimated statistical data, men are eight times more likely to develop a hernia and twenty times more likely to require a hernial repair surgery<sup>1</sup>.

Hernias are not a difficult surgical condition, but delayed presentations can result in complications ranging from strangulation, incarceration, obstruction to rare incidences of fistula formation<sup>2</sup>.

The country's low literacy rate contributes towards the deficient gap of understanding regarding the nature of disease process of hernias amongst the masses. Ignorance leads to lack of seeking medical advice<sup>2</sup>. Though public government hospitals provide almost free health facilities in Pakistan, but there is inadequate surgical care capacity in rural areas. Moreover, the private setups high cost makes for a financial constraint and some choose to seek homeopathic or quack treatments. All this contributes to hernial complications, increasing morbidity and mortality<sup>2</sup>. Untreated cases are a social life inhibitor, limiting task activity and possessing as a major chronic health risk<sup>3</sup>.

We report a rare complicated case of direct complete inguinal hernia with scrotal enterocutaneous fistula due to non-prompt management.

## CASE PRESENTATION

A 70-year-old man presented to the emergency department at Services Hospital Lahore, with right scrotal enterocutaneous fistula. He had a history of inguinoscrotal swelling since the past 10 years. Initially, it was reducible but became irreducible 6 months back and from the last 3 months, the patient started noticing faecal discharge from

the two small spontaneous openings in right-sided scrotal wall. The patient had an insignificant previous medical and surgical account. He had not consulted any allopathic medical advice but instead had taken help from an unknown local quack for his current complaint.

On examination, he was hemodynamically stable. The swelling was complete and irreducible, making 2 communications with the mucosa of the small bowel and feculent discharge was present. The right sided scrotal skin was excoriated, with adjacent area of necrotic patches and there was hyperpigmentation (Figure 1 & 2).

Abdominal examination revealed no signs of obstruction or distension. The abdomen was soft on palpation, non-tender with no guarding or rebound tenderness and bowel sounds were audible.

Initial investigations were done. Haemoglobin was 15.5 & TLC 7000, with other baseline pathology laboratory tests within normal range of limits. Radiological studies showed no signs of intestinal obstruction. Diagnosis of scrotal enterocutaneous fistula was deduced due to long standing inguinal hernia. The patient was administered intravenous fluids and broad-spectrum antibiotics.

A plan to do exploratory laparotomy under general anaesthesia was worked up. During laparotomy, the hernial sac contents containing small bowel were assessed. The bowel was mobilized from scrotum after packing the small bowl openings to prevent faecal dissemination. The perforated small bowel was resected, and the ileal segment was anastomosed end-to-end.

Placing a mesh would have been at high risk of infection, therefore, the deep inguinal ring was closed with a purse-string suture only. The right testis was exposed and viable. Necrotic scrotal wall was debrided and was put on regular saline dressing, twice a day.

The patient had an uneventful post-operative period. The patient was discharged from the hospital's inpatient admission, see Photographs showing the fistula at presentation (Figure 1 & 2).

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Photographs showing the fistula at presentation  
Fig.1



Fig. 2



## DISCUSSION

Inguinal hernias, on routine examination show a range of clinical features from an innocuous bulge in the groin region, with or without pain to life-threatening bowel strangulation. The estimated incidence is 0.3%–3% annually, showing that there is a low risk of incarceration and strangulation<sup>4</sup>. Most enterocutaneous fistulas develop because of a surgical consequence<sup>3-4</sup>. Thus, it is rare for the development of spontaneous enterocutaneous fistula in the scrotum secondary to incarcerated inguinal hernias in both adults and children<sup>5,6</sup>. So far there have been about 16 cases reported in literature, 8 being in paediatric age

group and 8 being in adults<sup>7,8</sup>. Such fistulas are mainly seen in developing countries, as reported earlier in Nigeria, Pakistan, and India, because of poverty, lack of health knowledge amongst the masses, negligence of patient's compliance leading to late presentations and non-prompt management<sup>7</sup>. Moreover, such fistula cases have been reported post-laparoscopic inguinal hernia repair as well<sup>8</sup>.

The pathophysiology of this hernial complication, starts with the exudate accumulation in the coverings of the hernia. This is followed by oedema of the bowel walls and the compromising of the blood supply of the hernia gut including the bowel wall. The more blood supply gets compromised, the more the oedema increases. This can lead to gut wall perforation. Further, when a superimposed infection happens, the necrosis spreads to the subcutaneous tissues as it progresses to involve the skin, an enterocutaneous fistula develops<sup>9-10</sup>.

One of the reasons for the delayed presentation of such a fistula is that the obstructed inguinal hernia before the development of the enterocutaneous fistula is painful but once the fistula is developed, it causes gut decompression and relieves the pain thus, giving a false sense of wellbeing to the patient<sup>2</sup>.

In strangulated hernia, when the bowel is twisted, the contents perforate and leak to the surrounding tissue<sup>10</sup>. It then suppurates through the fascial planes. Since, the inguinal-scrotal skin is thin; it favours the formation of a communication between the bowel and the skin, resulting in the fistula.

Immediate surgical management is advised in such patients because if the contents are faecal, they would cause damage not only to the skin but also the surrounding tissue. Hence, debridement of the devitalized skin and resection of the necrotic gut should be done. Alongside, the viability of the adjoining testis should be checked to look out for sepsis, Fournier gangrene and testicular necrosis, so an orchiectomy can be averted in time<sup>2-9</sup>.

In most cases, it is of prime importance to do an explorative laparotomy as there is a surgical limitation during inguinal dissection to approach the entero-scrotal fistulae. Thus, it is essential to proceed for urgent surgical exploration with bowel resection and end-to-end anastomosis or stoma fashioning<sup>2</sup>.

## CONCLUSION

This case reflects not only the rarity of complicated presentations of prolonged untreated inguinal hernia but also highlights state of health care in developing countries. Poverty and ignorance may lead to a delay in diagnosis of this condition but further, not seeking medical attention for inguinal swellings may result in such fistulas being developed in the patient. Early diagnosis of spontaneous entero-scrotal fistula and effort to increase elective inguinal hernia repair rate along with facilities for immediate surgical management will improve the standard of care. This will not only prevent this complication but also medico-economically be more effective as it will lower treatment cost as the patient will be discharged from the hospital earlier and will save the money spent on the treatment.

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