International Journal of Innovative Research in Medical Science (IJIRMS)
Volume 10, Issue 08, August 2025,
https://doi.org/10.23958/ijirms/vol10-i08/2104

Case Report

Consequences of Delaying Management of Inguinal Hernia: A Case Report of Enterocutaneous Fistula in a Child

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Received: 02 June 2025; Accepted: 16 July 2025; Published: 01 August 2025

Abstract

Introduction: Inguinal hernia is one of the most common surgical conditions worldwide. However, in some resource-limited regions, delays in surgical repair still remain an issue. These delays are often driven by systemic barriers such as high patient loads, limited healthcare access, and cultural beliefs about health. One rare but severe complication of delayed treatment is enteroscrotal fistula. ***Case Presentation:*** An 18-month-old boy presented with a 3-week history of a progressively enlarging left scrotal swelling, accompanied by a 3-day history of fecal discharge from the scrotum. The swelling became acutely painful shortly before admission. His caregivers had delayed seeking care, believing the condition would resolve spontaneously. Examination findings suggested an enteroscrotal fistula secondary to a strangulated inguinal hernia. Following initial resuscitation, surgical exploration found an ileal perforation. Resection and end-to-end anastomosis, herniotomy, and scrotal wound debridement were done. Recovery was uneventful, and the patient was discharged on postoperative day 7 in good condition. ***Discussion:*** This case highlights the potentially life-threatening consequences of delayed hernia management in resource-limited regions. While inguinal hernias are typically managed electively, systemic delays increase the risk of serious complications. Enteroscrotal fistula is extremely rare and carries a significant risk of infection, tissue loss, and even mortality if not promptly treated. This case shows the urgent need for improved caregiver education and broader access to timely surgical care. Strengthening primary healthcare systems and referral networks is essential in preventing avoidable morbidity in similar contexts.

Keywords: ***enteroscrotal fistula, inguinal hernia, pediatrics, health-seeking delay***

Introduction

A common surgical condition in children is an inguinal hernia, and incarceration is a well-known complication [1]. In Africa, treating children's surgical disorders is filled with difficulties due to the high number of ill children, delayed presentation, and frequently advanced pathology upon presentation [2]. Traditions and cultural practices unique to the community the kid is coming from alter the family's perspective on the treatment of surgical disorders. Situations like this could explain certain dramatic and exceptional conditions like enteroscrotal fistula following an incarcerated inguinal hernia. Inguinal hernia is incarcerated in around 12-17% of cases [3,4]. About 10% of patients require emergency surgery, while the majority of incarcerated inguinal hernia cases are treated with early reduction under anesthesia and elective herniotomy [5].

Here we report a case of enteroscrotal fistula, a complication left inguinal hernia.

Case Presentation

An 18-month-old boy was brought to our consultation for left scrotal swelling of three weeks and persistent stool discharge from a wound on the swelling for three days. The parents reported that the swelling had been evolving for three weeks and became painful few days before admission. A diagnosis of enteroscrotal fistula was made. After resuscitation a groin exploration was done, with findings of strangulated inguinal hernia with ileal perforation. Resection and end-to-end ileo-ileal anastomosis was performed as well as herniotomy and debridement of the scrotal wound. He was discharged 7 days after surgery.

Figure 1 Preoperative Picture

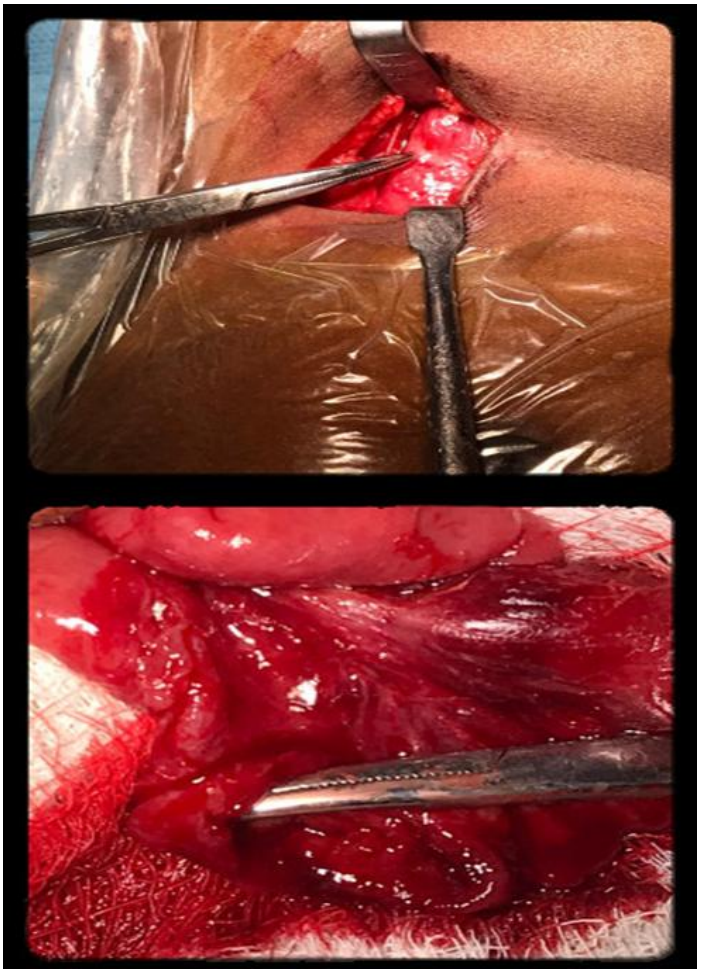

Figure 2: Intraoperative Pictures

Figure 3: Postoperative Picture

Discussion

A delay in the treatment of inguinal hernia may lead to incarceration and strangulation. Various series have reported incidence of incarceration ranging from 12% to 31% [1,4]. However, the risk of strangulation following incarceration is very low (up to1.8%) [5]. Strangulated inguinal hernia may lead to enteroscrotal fistula formation [6].

In developing countries the risk of incarceration and hence complications is much higher due to delay in seeking treatment. This may be the result of lack of awareness among parents, general practitioners, and even pediatrician about the timings of surgery for inguinal hernia in neonates and children.

With spontaneous enteroscrotal fistula emergency is usually over and patient is managed electively after initial stabilization. Surgical approach is made either through inguinal region or abdomen. We performed laparotomy in our patient. To conclude, early diagnosis and management of inguinal hernia may prevent many sinister problems of delayed presentation.

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As a pediatric surgeon, encountering an enteroscrotal fistula is exceptionally rare and deeply concerning, especially given that it is largely preventable through timely surgical intervention. In this case, an 18-month-old male presented with a ruptured inguinal hernia leading to spontaneous fecal discharge through the scrotum. This developed due to prolonged incarceration and subsequent bowel strangulation, a known but avoidable outcome of untreated or delayed inguinal hernia repair. Delays in treating an inguinal hernia

might result in incarceration, strangulation and dare complications. Based on available data the incarceration rate of inguinal hernia ranges from 12% to 31% [3,5,6]. However, there is extremely little chance of strangulation after incarceration (up to 1.8%) especially among children [3,7]. Strangulation occurs when the herniated bowel becomes compressed within the inguinal canal, cutting off its blood supply. If untreated as in the above case, the ischemic bowel perforates, forming a fistulous tract to the scrotal skin, culminating in enteroscrotal fistula formation. The literature suggests this condition occurs almost exclusively in resource-limited settings, particularly in Nigeria, India, and Pakistan, where barriers to early intervention such as socioeconomic constraints, illiteracy and misdiagnosis are prevalent [2,8]. The development of an enteroscrotal fistula may result from a strangulated inguinal hernia. Delays in obtaining treatment increase the chance of incarceration and subsequent consequences in developing nations. This might be because parents, general practitioners, and even pediatricians are unaware of when surgery is necessary for inguinal hernias in newborns and kids. Moreso, the rarity of enteroscrotal fistula contributes to the late intervention as physicians often times don't anticipate this as an eventual outcome of a strangulated hernia.

Only a handful of cases have been reported in the literature and most of them occurred in resource limited countries such as Nigeria, India and Pakistan [6]. It is also noted that most of the cases had peculiar features such as low birth weight and prematurity.

Obstructed inguinal hernias which can later go on to the development an enteroscrotal fistula may begin as a painful process but once the fistula has developed, it leads to decompression of gut and thus relieve from the pain. However, in the case of paediatric age group appropriate identification of pain might be difficult and or inaccurate leading to omission by caregivers and eventual misdiagnosis. This is another reason for delayed presentation of such fistulas. Furthermore, strangulation if not corrected in time may lead to other local and systemic complications like sepsis, Fournier gangrene and testicular necrosis [9]. Therefore, urgent release of strangulation along with resection of necrotic gut and skin is very important to save the patient's life [9].

Generally, treatment of enteroscrotal fistula has a common approach. After initial stabilization, the patient is handled electively. The inguinal area or the abdomen are used for the surgical approach while also applying the general principles of hernia surgery in children.

Conclusion

In conclusion, several serious issues of delayed presentation including rupture and fistular formation may occur. This can be avoided with early detection and treatment of inguinal hernias.

Declarations

Ethical Approval and Informed Consent

Ethical approval for this case report was obtained from University of Abuja Health Research Ethics Committee UATH HREC (Protocol number UATH/HREC/PR/224). informed consent was obtained from parent of patient for information and photos to be published in this article.

Data Availability

All data available on corresponding author upon responsible request.

Conflicts of Interest

The author(s) declare(s) that there is no conflict of interest.

Funding Statement

None

References

[1] Talabi A, Sowande O, Tanimola A, Adumah C, Adejuyigbe O. Incarcerated and strangulated inguinal hernias in children: A 10-year retrospective analysis. Libyan Int Med Univ J [Internet]. 2020 Jan [cited 2025 Feb 15];05(01):3–7. Available from: http://www.thieme-connect.de/DOI/DOI?10.4103/LIUJ.LIUJ_10_20

[2] Chirdan LB, Ameh EA, Abantanga FA, Sidler D, Elhalaby EA. Challenges of training and delivery of pediatric surgical services in Africa. J Pediatr Surg [Internet]. 2010 Mar [cited 2025 Jan 19];45(3):610–8. Available from: https://linkinghub.elsevier.com/retrieve/pii/S0022346809009385

[3] Sharif M, Ijaz L, Iqbal S, Sheikh A. Enteroscrotal fistula: a rare complication of incarcerated inguinal hernia. APSP J Case Rep. 2010 Jul;1(2):21.

[4] Sowande O, Adejuyigbe O, Ogundoyin O, Uba A, Chinda J. Spontaneous scrotal faecal fistula: A rare complication of incarcerated inguinal hernia in infancy. J Indian Assoc Pediatr Surg [Internet]. 2006 [cited 2025 Jan 19];11(4):244. Available from: http://www.jiaps.com/text.asp?2006/11/4/244/29610

[5] Rowe MI. Incarcerated and Strangulated Hernias in Children: A Statistical Study of High-Risk Factors. Arch Surg [Internet]. 1970 Aug 1 [cited 2025 Jan 19];101(2):136. Available from: http://archsurg.jamanetwork.com/article.aspx?doi=10.1001/archsurg.1970.01340260040006

[6] Houegban ASCR, Assan BR, Guedenon MA, Noukpozounkou SB, Gogan MVLSB, Yassegoungbe MG, et al. Spontaneous enteroscrotal fistula following an incarcerated inguinal hernia in a neonate: Case report and literature review. Int J Surg Case Rep [Internet]. 2022 Jan [cited 2025 Jan 19];90:106656. Available from: https://linkinghub.elsevier.com/retrieve/pii/S2210261221011585

[7] Harvey MH, Johnstone MJS, Fossard DP. Inguinal herniotomy in children: A five year survey. J Br Surg [Internet]. 1985 Jun 1 [cited 2025 Jan 19];72(6):485–7. Available from: https://academic.oup.com/bjs/article/72/6/485/6193269

[8] Malik P, Rathi M, Kumar K, Sharma R, Meena P, Arya A, et al. Scrotal enterocutaneous fistula: a rare initial presentation of inguinal hernia. J Surg Case Rep [Internet]. 2014 Jun 2 [cited 2025 May 25];2014(6):rju056–rju056. Available from: https://academic.oup.com/jscr/article-lookup/doi/10.1093/jscr/rju056

[9] Asghar MS, Kaleem A, Rijal S. A rare case of spontaneous scrotal enterocutaneous fistula as a complication of incarcerated inguinal hernia with review of literature. Prof Med J [Internet]. 2020 Jul 10 [cited 2025 Apr 23];27(07):1537–40. Available from: http://www.theprofesional.com/index.php/tpmj/article/view/4219