

Inguinal Hernia May Hide the Diagnosis of a Simultaneous Rare Type of Femoral Hernia: Laparoscopic Repair of Laugier's Hernia

Dilşad Dereli¹, Baran Tokar²

Received on: 28 May 2025; Accepted on: 22 August 2025; Published on: XX XXXX XXXX

ABSTRACT

Aim and background: Femoral hernia is rare in children and can be difficult to diagnose because it is often confused with indirect inguinal hernia. Femoral hernia is uncommon among all types of hernias in children. Laparoscopy plays an important role in the diagnosis and treatment of atypical masses in the inguinal region.

Case description: A 6-year-old girl was operated on for a bilateral inguinal hernia at another hospital using a bilateral inguinal open surgical approach. One month later, she presented with complaints of irreducible swelling, pain, and restlessness in the right groin. The swelling was observed below the inguinal canal and the inguinal hernia incision. On laparoscopic exploration, it was noted that the omentum entered through Laugier's hernia, which originated from the side of the lacunar ligament medial to the inferior epigastric artery on the right side. Laparoscopic repair was performed.

Conclusion: The laparoscopic approach provides better visualization of the inguinal region and improves diagnostic accuracy. It also allows for the correction of any defects in the inguinal region.

Clinical significance: The possibility of femoral hernia variants should always be considered in the differential diagnosis of inguinal masses in children, especially if hernia or incarcerated tissue is palpated in an atypical position close to the inguinal ligament.

Keywords: Case report, Femoral hernia, Laparoscopy, Laugier's hernia.

World Journal of Laparoscopic Surgery (2025): 10.5005/jp-journals-10033-1745

INTRODUCTION

Femoral hernias constitute approximately 4% of inguinal hernias.¹ They are typically located beneath the inguinal ligament and medial to the vessels, developing from the weak area in the transversalis fascia that forms the femoral sheath through the femoral canal. The subtypes of femoral hernia include as follows: Laugier hernia (lacunar ligament), Callisen-Cloquet hernia (pectineal fascia through the vessels), Hesselbach hernia (lateral to the vessels), Velpéau hernia or Teale hernia (prevascular, anterior to the femoral vessel), and Serafini hernia (retrovascular).² Among these subtypes, Laugier hernia is very rare and has not been reported in pediatric cases. In this report, we present a rare case of Laugier's hernia treated with laparoscopic repair.

CASE DESCRIPTION

A 6-year-old girl was operated on for bilateral inguinal hernia at another hospital using an open surgical approach. Preoperative ultrasonography had reported bilateral inguinal hernias. One month later, she presented to the emergency department with complaints of irreducible swelling, pain, and restlessness in the right groin. The swelling was observed below the inguinal canal and the inguinal hernia incision. Ultrasound revealed an unreduced omentum entering medial to the inferior epigastric artery. Laparoscopic examination was planned. After inserting a 5 mm port, CO₂ was insufflated to a pressure of 8 mm Hg. A 30° laparoscope was then used, and two 5 mm ports were placed. The inner ring of both the right and left inguinal canals was closed due to the previous operation (Fig. 1). The omentum was observed

^{1,2}Department of Pediatric Surgery, Division of Pediatric Urology, Eskişehir Osmangazi University, Eskişehir, Türkiye

Corresponding Author: Dilşad Dereli, Department of Pediatric Surgery, Division of Pediatric Urology, Eskişehir Osmangazi University, Eskişehir, Türkiye, Phone: +9022223929793280, e-mail: derelidilsad@gmail.com

How to cite this article: Dereli D, Tokar B. Inguinal Hernia May Hide the Diagnosis of a Simultaneous Rare Type of Femoral Hernia: Laparoscopic Repair of Laugier's Hernia. *World J Lap Surg* 2025;xx(x):xx-xx.

Source of support: Nil

Conflict of interest: None

Patient consent statement: A written informed consent was obtained from the patient for the publication of details, which can include photographs and/or videos and/or case history to be published in any printed/online journals.

entering through Laugier's hernia, originating from the side of the lacunar ligament medial to the inferior epigastric artery on the right side. Omentectomy was performed, and 3/0 Ethibond sutures were used for hernia repair (Figs 2 and 3). The patient was in good postoperative condition.

DISCUSSION

Laugier hernia is defined as a herniation of the peritoneal sac through the lacunar ligament (Gimbernat ligament) and is classified as an atypical femoral hernia.³ Although femoral hernias are more common in girls than in boys, the sex ratio for Laugier hernia has not been determined. The diagnosis of Laugier's hernia

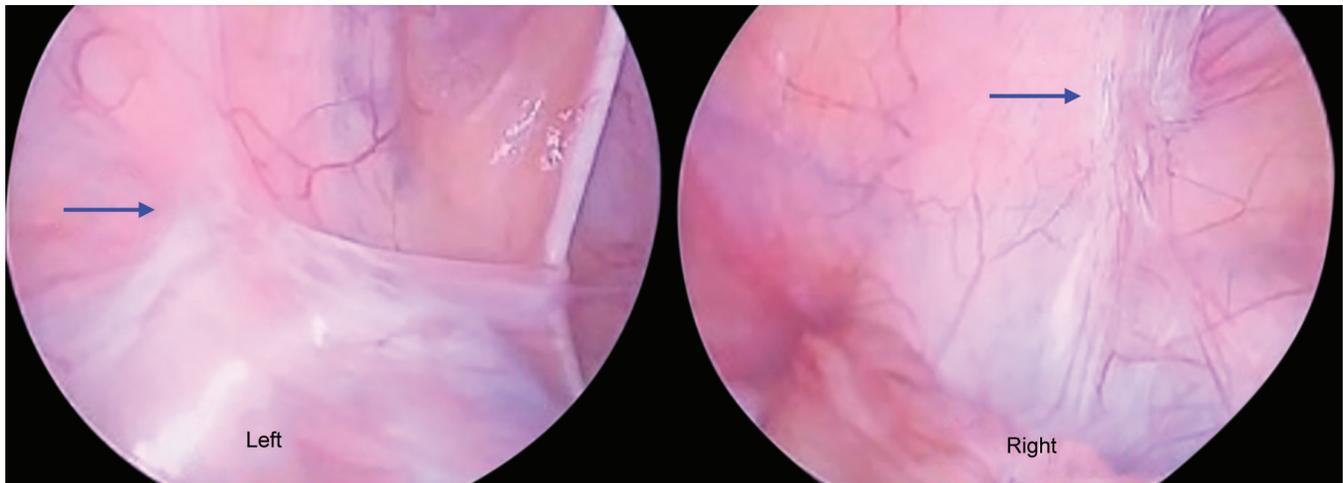


Fig. 1: During laparoscopy, an inguinal hernia was not observed. Bilateral inner rings of the inguinal canal were closed due to the previous operation



Fig. 2: On the right side, omentum entering through the Laugier hernia orifice (FH variant), medial to the inferior epigastric artery, lateral to the pubic tubercle, at the level of the lacunar ligament was observed. Omentectomy was performed



Fig. 3: A 3/0 Ethibond suture was used for hernia repair

is quite tricky due to its rarity and clinical course, which is similar to that of a typical femoral hernia. The limited number of reports on Laugier's hernia may be due to low awareness of the condition and its misdiagnosis as a typical femoral hernia. Additionally, with conventional open surgery having a limited surgical field, Laugier's hernia can be challenging to diagnose accurately. However, with the widespread use of laparoscopic techniques, the diagnosis is more easily made due to the enhanced surgical field of view. As with other inguinal hernias, factors such as chronic increases in abdominal pressure (e.g., chronic coughing) may contribute to the development of femoral hernias. Another factor could be the

deterioration of collagen quality. Although most Laugier hernias are asymptomatic, femoral swelling may occur if the herniated content is large, as seen with typical femoral hernias.² The content of the Laugier hernia is primarily composed of preperitoneal fat. Pain may develop in patients if the preperitoneal fat becomes incarcerated.⁴

The treatment of Laugier hernia involves reducing the hernia content and closing the hernia orifice formed at the lacunar ligament. Laparoscopic surgery offers advantages over open surgery because Laugier's hernia or other hernias can be detected and treated more easily and clearly.⁵

The laparoscopic approach is also recommended for recurrent groin hernias that were previously repaired using open techniques, as it allows for repair through undisturbed planes of the retroinguinal and retropubic spaces. One immediate advantage of the laparoscopic approach is the ability to inspect all potential hernia orifices and repair any identified defects with minimal alteration of the technique.⁶

A hernia is typically repaired using synthetic mesh, either through open surgery or increasingly with less invasive laparoscopic procedures. However, in children, who are still in their developmental stages, mesh use is generally avoided.

In this case, the patient presented with swelling and pain in the inguinal region, and a laparoscopic approach was chosen. Laparoscopic hernia repair facilitates the differentiation between inguinal and femoral hernias.

CONCLUSION

The possibility of femoral hernia variants should always be considered in the differential diagnosis of inguinal masses in children, particularly when hernia or incarcerated tissue is palpated in an atypical position close to the inguinal ligament. The laparoscopic approach provides better visualization of the inguinal region and improves diagnostic accuracy.

AUTHORS CONTRIBUTIONS

Concept: DD, Design: DD, Data Collection or Processing: DD, BT, Analysis or Interpretation: DD, BT, Literature Search: DD Author: DD.

ORCID

Dilşad Dereli  <https://orcid.org/0000-0003-1261-3405>

Baran Tokar  <https://orcid.org/0000-0002-7096-0053>

REFERENCES

1. Sandblom G, Haapaniemi S, Nilsson E. Femoral hernias: A register analysis of 588 repairs. *Hernia* 1999;3:131–134. DOI: 10.1007/BF01195312.
2. Ates M, Dirican A, Kose E, et al. First laparoscopic totally extra-peritoneal repair of Laugier's hernia: A case report. *Hernia* 2013;17:121–123. DOI: 10.1007/s10029-011-0820-2.
3. Musgrove JE, Mckee GH. Hernia through Gimbernat's ligament. *Can Med Assoc J* 1964;90:134–135. PMID: 14118685.
4. Henriksen NA, Thorup J, Jorgensen LN. Unsuspected femoral hernia in patients with a preoperative diagnosis of recurrent inguinal hernia. *Hernia* 2012;16:381–385. DOI: 10.1007/s10029-012-0924-3.
5. Tsakanov S, Manoharan V. Laparoscopic finding of Laugier's hernia: A rare sight. *ANZ J Surg* 2021;91:E82–E83. DOI: 10.1111/ans.16127.
6. Simons MP, Smietanski M, Bonjer HJ, et al. International guidelines for groin hernia management. *Hernia* 2018;22:1–165. DOI: 10.1007/s10029-017-1668-x.