



# Intraoperative Diagnosis and Treatment of a Littre's Hernia Without Incarceration in a Child

## *İnkarserasyonsuz Littre Fıtığının İntraoperatif Tanı ve Tedavisi*

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### SUMMARY

*Littre's hernia is characterized by Meckel's diverticulum in a hernia sac located in one of the inguinal, umbilical, femoral, ventral, sciatic and lumbar regions. Littre's hernia defined within inguinal hernia is a rare entity and defining an inguinal Littre's hernia without incarceration is the rarest. The major problem in the subject is defining the treatment when this rarest situation is diagnosed during the operation. We performed segmental ileum resection and discharged the patient in the postoperative third day. In this report defined this rare formation and discussed our way of treatment in the light of the literature.*

**Key Words:** Meckel's diverticulum, inguinal hernia, Littre's hernia.

### ÖZET

*Littre hernisi Meckel divertikülünün inguinal, umbilikal, femoral, ventral, siatik ve lumbar bölgelerinden birinde bulunan fıtık kesesine yerleşmesi ile oluşur. Littre hernisinin kasık fıtığında olması ender bir durumdur ve inkarserasyon olmadan tespit edilmesi ise en az görülen şeklidir. En önemli sorun ameliyat sırasında bu ender durum ile karşılaşıldığında tedavinin şeklini planlamaktır. Segmental ileum rezeksiyonu uygulanmıştır ve ameliyattan sonraki 3. günde hasta taburcu edilmiştir. Bu yazıda ender görülen bir oluşum rapor edilmiştir ve literatür ışığında tedavi yöntemi tartışılmıştır.*

**Anahtar Kelimeler:** Meckel divertikülü, kasık fıtığı, Littre hernisi.

### INTRODUCTION

Meckel's diverticulum within a hernia sac is called Littre's hernia. The entity was first described by Alexis Littre in 1700 but the denomination "Littre's hernia" was first used by Reinke in 1841 (1,2). Littre's hernia is reported for inguinal, umbilical, femoral, ventral, sciatic and lumbar regions (3). Incarcerations of Littre's hernia are 0.6 per cent but the very rare situation is definition of a Littre's hernia without incarceration in a child (3-5).

Herein, the authors report an operation of a Littre's hernia without incarceration in the inguinal region in a 6-year-old child. Not only the rarity can be

a surprising but deciding what to do may be a confusing problem in the operation. For these reasons, we aimed to report the disease and our decision for treatment in the light of the literature.

### CASE REPORT

Six -years- old male patient was diagnosed with inguinal hernia in pediatric surgery clinics. Inguinal region had a mild and irreducible thickness but Littre's hernia was not estimated with this insignificant finding during the physical examination. In his elective hernia operation, a tissue reminding a fibrotic and irreducible tissue was suggested to be in the sac. Consequently, hernia sac was opened. Thick and tubular fibrotic

connective band was detected throughout the hernia sac. A part of the small intestine protruded from the internal ring after the extraction of this fibrotic tissue (Figure 1). In the next view Littre's hernia was diagnosed when Meckel's diverticulum was seen (Figure 2). Segmental ileum resection and anastomosis was performed. In the pathologic examination, no ectopia was detected and fibrotic connective tissue was reported at the top of the diverticulum. Patient was discharged in post-operative third day and control examination in the second week of discharge was totally normal.

## DISCUSSION

The complication rates of Meckel's diverticulum can be as high as 15-20 per cent (6). Clinical complications with Meckel's diverticulum are mostly seen at

pediatric age group and hemorrhage is the most frequent complication (1). One of the complications of the Meckel's diverticulum is Littre's hernia which is seen in 10% of the diverticula's complications (5,6). Kline reported that Littre's hernia is the rarest complication in childhood (5). Additionally, detecting a Meckel's diverticulum in a hernia without incarceration is also very rare (3).

Clinical features of the Littre's hernia and other hernias are almost same and therefore, preoperative diagnosis of Littre's hernia is difficult unless complications like inflammation occurs (2,4). Messina et al suggested that surgeons should keep this diagnosis in mind when dealing with irreducible hernias (2). The features of inguinal examinations in our case were the same as defined in the literature because we only detected a swollen inguinal region without any other complaints. We might use ultrasound to evaluate the region but the patient did not have an urgent complaint and in literature, it was reported that radiological examinations were hitherto used when Meckel's diverticulum complications were suspected (1). Sinha et al reported a case diagnosed by computerized tomography in which the Meckel's diverticulum was seen as a tubular, blind-ending structure arising and communicating with the distal ileum (1). In our case, we could say that diverticulum would not be demonstrated, even if we used radiodiagnostic tools as Sinha's description because we only found a fibrotic and irreducible band throughout the inguinal canal connecting to the distal part of the hernia sac with Meckel's diverticulum above the internal inguinal ring. Thus diverticulum was originally related with the hernia sac by the fibrotic band.

There are controversies for the treatment of asymptomatic Meckel's diverticulum. It was reported that complications with asymptomatic diverticulum are as high as 25% which force authors to excise the diverticulum (6). In general, wedge resection is suggested to be the treatment but segmental ileum resection may be performed if an induration, fibrosis or ulcer caused by a heterotopic mucosa at the base of the diverticulum has been present (3). This operation can easily be performed on the inside of the hernia sac (2). Messina et al, reported that segmental ileum resection and anastomosis should only be performed to prevent other complications due to the presence of heterotopic tissue and if the loop of the diverticulum is affected from fibrosis or ulcerations (2). We defined the Meckel's diverticulum during the

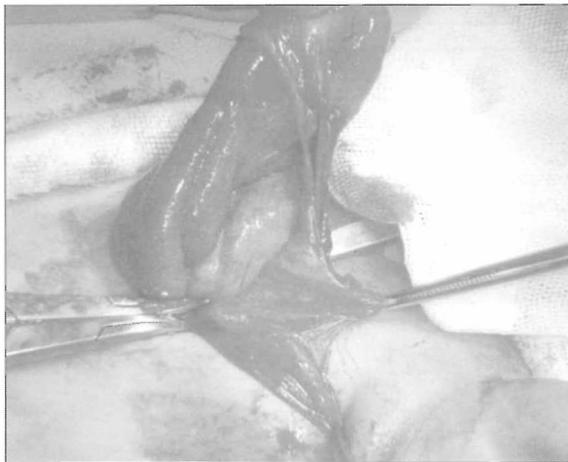


Figure 1. Ileum segment with Meckel's diverticulum. Note the fibrotic band through the distal portion of the hernia sac.



Figure 2. Meckel's diverticulum after releasing from fibrotic band.

operation without any evaluation like heterotopic mucosa scintigraphy. We performed segmental ileum resection to perform an absolute certain. We suggest that uncertainty in the presentation of heterotopic mucosa can force surgeons to perform an operation as we perform in our patient. Also, we experienced that resection-anastomosis could be performed from the hernia sac incision. Patient was discharged in the third postoperative day. We suggested that morbidity that could be seen with resection procedure did not occur.

In short, Littre's hernia without an incarceration is very rare at pediatric age group which may cause diagnosis and treatment difficulties for surgeons. We preferred to perform a segmental ileum resection in our patient because Littre's hernia without incarceration may almost be diagnosed in the operation which force surgeon to structure a wide and secure treatment for patient. We recommend the segmental ileum resection for this purpose.

## REFERENCES

1. Sinha R. Bowel obstruction due to Littre hernia: CT diagnosis. *Abdom Imaging* 2005;30:682-4.
2. Messina M, Ferrucci E, Di Maggio DMG, et al: Littre's hernia in newborn infants: Report of two cases. *Pediatr Surg Int* 2005;21:485-7.
3. Pekmezci S, Sarıbeyoğlu K, Eroğlu E, et al. Littre Fitiği. *Çağdaş Cerrahi Dergisi* 1998;12: 213-4.
4. Vaos G: Perforation of an inguinoscrotal Littre's hernia due to Meckel's diverticulitis: An unusual cause of acute hemiscrotum. *Acta Paediatr* 2006;95:251-2.
5. Kline AH: Incarceration of Meckel's diverticulum in an inguinal hernia. *J Pediatr* 1958;53:479-80.
6. Giritli G, Özkan OV, Şanlı E, et al. Littre Fitiği. *Çağdaş Cerrahi Dergisi* 2000;14:189-90.