

■ Case Report

Incarcerated Littre's hernia: uncommon presentation of Meckel's diverticulum

İnkarsere Littre hernisi: Meckel divertikülünün nadir bir presentasyonu

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ABSTRACT

Meckel's diverticulum is a congenital abnormality due to incomplete closure of omphalo-mesenteric duct. It is called 'Littre hernia' when it is present in the hernia sac. In this paper, we present a 39-year-old man who underwent emergency surgery for incarcerated inguinal hernia and Meckel's diverticulum detected in the hernia sac.

Keywords: Meckel's diverticulum, Littre's hernia, inguinal hernia

ÖZ

Meckel divertikülü omfalo mezenterik kanalın kapanmaması sonucu oluşan konjenital bir anomalidir. Nadiren fitik kesesi içinde bulunduğunda Littre Hernisi olarak adlandırılmaktadır. Bu olgu sunumunda inkarsere inguinal herni tanısı ile opere edilen ve herni kesesi içinde Meckel divertikülü saptanan 39 yaşında bir erkek hasta sunulmuştur.

Anahtar kelimeler: Meckel divertikülü, Littre hernisi, inguinal herni

INTRODUCTION

Meckel's diverticulum (MD) is a congenital anomaly due to incomplete obliteration of the omphalomesenteric duct and is observed around 1-3% in adults. It is classified as a "real" diverticulum because it contains the entire intestinal layer. MD can cause some complications including diverticulitis, obstruction and bleeding [1]. Littre's hernia (LH) is an abdominal hernia that involves the MD in the hernia sac. LH is an extremely rare condition [2]. We present a case of incarcerated inguinal hernia containing MD in the hernia sac and the recent literature was reviewed.

CASE

Previously healthy 39 year old man admitted to the emergency department with a complaint of swelling and severe pain in the right groin. Physical examination revealed a right inguinal hernia. Reduction was tried in emergency room but could not succeed. In laboratory study, biochemical tests were in normal range and complete blood count revealed leukocytosis with a neutrophil predominance (leukocyte: 17100/uL, neutrophil: 14500/uL). Due to certainty of the diagnosis, we didn't perform any radiological study. Urgent surgery was decided because of strangulation signs (irreducible hernia, leukocytosis and ileus findings). The informed consent was obtained from the patient. In operation, an inflamed, swelled and partially ecchymotic Meckel's diverticulum was detected in the hernia sac. Around the diverticulum, small intestine loops were adherent so the diverticulum was exised with segmental ileal resection (**Figure 1**). Intestinal continuity was obtained by side-to-side isoperistaltic ileal anastomosis. The postoperative period was uneventful and the patient was discharged on the fifth day after the operation. There was no heterotopic mucosa in the diverticulum in the pathological examination of the resected specimen.



Figure 1. Peroperative image of the inflamed Meckel's diverticulum and surrounding bowel segments

DISCUSSION

Although small bowel diverticulas was first described by Fabricus Hildanus in 1598, the term of 'Meckel's diverticulum' has been used since the German anatomist Johann Friedrich reported his observations in 1809 [3]. Normally, the omphalo-mesenteric duct is obliterated by weeks 5-9 of intrauterine life. MD is a consequence of incomplete closure of the duct. It is located on the antimesenteric side of the intestine and is accepted as a true diverticulum because it contains all the layers of the bowel wall [4]. Meckel's diverticulum is usually asymptomatic and only 4-6% of the cases are complicated. Among the complicated cases half of them are under 10 years old, and the most seen symptom is bleeding. Other complications are including intestinal obstruction, intussusception, inflammation of the diverticulum, perforation and volvulus. Diverticulae greater than 2 cm, male sex, young age (<50) and heterotrophic mucosa in the diverticulum are the risk factors for symptomatic MD [5]. Herniation of MD -also called Littre's hernia- is rare hernia type it was first reported by French surgeon Alexis de Littre in 1700. Yamaguchi et al. [6] reported an incidence of LH of 4.7% in their case series of 600 MD. Incarceration of the incarceration of LH is a very rare condition and it is reported that the incidence in various case series is between 0.6-0.8%. In a serie of Mayo Clinic, among the 1476 cases, incarceration was reported in only 2 cases [5-9]. It may not be possible to make diagnosis of incarcerated LH preoperatively. Because the incarcerated hernia is usually diagnosed by a physical examination and no further radiological investigation is needed. Computed tomography (CT) of the abdomen may be useful, but it would not be diagnostic in all cases [10]. Because of incarcerated hernia was diagnosed by physical examination any imaging studies were needed in our case. The treatment of incarcerated LH is urgent surgery. Diverticulectomy or segmental bowel resection involving the diverticulum are the treatment options. We preferred segmental ileal resection, due to the severe adherence of the intestinal segments to the inflamed diverticulum. Hernia repair can be made safely with bowel resection. We performed Lichtenstein hernia repair following bowel resection. Midline incision can be used in addition to the inguinal incision in cases where inadequate exposure or dissection is not possible [11].

CONCLUSION

Meckel's diverticulum is an uncommon congenital anomaly and rarely can be found in a incarcerated hernia sac. It is seen mostly in young patients with large diverticulas, and usually can be diagnosed by physical examination. Today

diverticulectomy with hernia repairment at the same session is the best treatment option for this rare condition.

DECLARATION OF CONFLICT OF INTEREST

The authors whose names are listed immediately below certify that they have no affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

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