

# A rare cause of fatal postpartum complication: Intestinal ischemia due to internal herniation

Ölümcül doğum sonrası komplikasyonların nadir bir nedeni: İnternal herniasyona bağlı intestinal iskemi

Fahrettin Yıldız<sup>1</sup>, Harun Toy<sup>2</sup>, Hakan Camuzcuoglu<sup>2</sup>, Alpaslan Terzi<sup>1</sup>, Mehmet Vural<sup>2</sup>, Ali Uzunkoy<sup>1</sup>

<sup>1</sup>Harran University Medical Faculty, Department of General Surgery

<sup>2</sup>Harran University Medical Faculty, Department of Obstetrics and Gynecology

## Corresponding Author

Assist. Prof. Dr. Fahrettin YILDIZ, Harran University Medical Faculty, Department of General Surgery, 63300, Sanliurfa, Turkey. Tel: +90-414-3141170  
Fax: +90-414-3151581 e-mail: fahrettinyildiz@hotmail.com

## Abstract

Internal hernias are complete or partial protrusions of viscera or tissues through an intraperitoneal orifice existing in the abdominal cavity. If the viscera such as intestine enter into defect, it may present with necrosis. Cümlelerin, In this report, we present a case of acute intestinal ischemia occurred due to the internal herniation manifested following a normal vaginal birth and then successfully treated with ileal resection and anastomosis. Internal herniation is also known as one of the rare causes of acute abdominal pain during the postpartum period. This study is a case report which is very rarely seen type of intestinal ischemia due to internal herniation.

**Keywords:** postpartum complication, intestinal ischemia, internal herniation

## Özet

İnternal herniler, iç organların veya dokuların karın boşluğunda varolan intraperitoneal açıklıktan geçmesidir. Barsaklar gibi içorganlar bu delikten geçerse nekroz gelişebilir. Biz bu yazıda normal vajinal doğum sonrasında, ileal rezeksiyon ve anastomozla başarılı bir şekilde tedavi ettiğimiz internal herniasyona bağlı akut intestinal iskemi vakasını sunuyoruz. İnternal herniasyon, postpartum dönemde görülen akut karın ağrısının nadir bir nedenidir. Bu çalışma, literatürde rastlamadığımız ve çok ender karşılaşılabilecek internal herniasyona bağlı intestinal iskemisi olan bir olgunun sunumudur.

**Anahtar kelimeler:** doğum sonrası komplikasyon, barsak nekrozu, internal herni

## Introduction:

'Intestinal ischemia is such a lethal condition that its diagnosis is often delayed mainly due to its nonspecific clinical presentation. There are several possible causes of intestinal ischemia and infarction such as adhesions, arterial embolus, arterial or venous thrombosis, abdominal wall hernias, and internal hernias (1). Internal hernia is protrusions of viscera including intestines through an orifice existing in the abdominal cavity. The orifice can be either physiological such as Winslow foramen, congenital like ileocecal fossa, or pathological like abnormal anatomical entities after surgery or trauma. Following the occurrence of internal hernia, serious complications such as strangulation due to ischemia or intestinal necrosis may develop if the diagnosis and the treatment are delayed or improper (2). Intestinal ischemia following the internal herniation is the most rarely seen complication in postpartum period. To our knowledge, there is still no case report presenting intestinal ischemia due to protrusion of intestine through an abnormal orifice occurred secondary to the blunt trauma like delivery. In this report, we present a case of acute intestinal ischemia due to internal herniation following normal vaginal birth and which was

successfully treated with ileal resection and anastomosis.

## Case Report:

A 28 year old woman, who had no prior operation complained of severe abdominal pain on the fifth day after giving birth to her third child was hospitalized with the suspicion of postpartum acute abdomen in the state hospital. The status of the patient exacerbated 9 days after delivery so the patient admitted to our department in the 9th postpartum day. We initially diagnosed as postpartum uterine rupture. Abdominal ultrasound showed collections of free fluid and small bowel dilatation consistent with obstruction. Diagnostic laparoscopy was performed for the accurate diagnosis and confirmation. Ileal resection and ileo-ileal anastomosis with laparotomy were then performed. We observed that there was transmesenteric hernia, including defect in the small bowel mesentery with small bowel necrosis (Figure 1). Ileal resection and ileo-ileal anastomosis with laparotomy were performed. She had an uneventful recovery and was discharged 4 days after the operation.

## Discussion:

Intestinal ischemia is known as the lethal condition and may evolve towards potentially devastating complications

(3). Intestinal ischemia due to internal herniation is rare. Orifices causing internal herniations generally consist of a prior surgically created entrapment. The orifices may be formed by trauma uncommonly (4). Vaginal delivery is known to be associated with trauma to the pelvic floor (5). 'In this case, we observed defect in the mesentery of the small bowel and we suppose that the mesenteric defect which the intestine protruded through is formed by the pressure during the delivery of the child.

In the postpartum period, surgical emergencies are rare and most of the physicians have little experience of them. In addition the abdominal symptoms of the patients with acute abdomen in the

postpartum period are thought to be related to the pregnancy and also the signs are rarely convincing in contrast to the symptoms. Owing to these causes, there may be delay in making an accurate diagnosis.

Early diagnosis and treatment of intestinal necrosis is essential for a successful outcome in the management of this condition (6). So, clinicians who treat patients with acute abdomen in the early postpartum period should also consider the case of intestinal necrosis due to internal herniation as one of the rare but severe complications. From this point of view, this case highlights the importance of being aware of this rare, but potentially fatal condition when assessing patients with abdominal pain in postpartum period.



**Figure 1:** Ileal necrosis due to internal herniation is illustrated. The black arrow indicates narrow mesenteric hole which the necrotic ileum segments passes through.

*Yazarlarla ilgili bildirilmesi gereken konular (Conflict of interest statement) : Yok (None)*

### References

- 1) Berland T, Oldenburg WA. Acute mesenteric ischemia. Curr Gastroenterol Rep. 2008;10:341-6
- 2) Duarte GG, Fontes B, Poggetti RS, Loreto MR, Motta P, Birolini D. Strangulated internal hernia through the lesser omentum with intestinal necrosis: a case report. Sao Paulo Med J. 2002;120:84-6.

- 3) Unchanged high mortality rates from acute occlusive intestinal ischemia: six year review. Langenbecks Arch Surg. 2008 Mar;393(2):163-71.
- 4) Fan HP, Yang AD, Chang YJ, Juan CW, Wu HP. Clinical spectrum of internal hernia: a surgical emergency. Surg Today. 2008;38(10):899-904.
- 5) Durufle A, Nicolas B, Petrilli S, Robineau S, Guillé F,

- Edan G, Gallien P. Effects of pregnancy and childbirth on the incidence of urinary disorders in multiple sclerosis. Clin Exp Obstet Gynecol. 2006;33(4):215-8
- 6) Zeybek N, Yildiz F, Kenar L, Peker Y, Kurt B, Cetin T, et al. D-dimer levels in the prediction of the degree of intestinal necrosis of entrapped hernias in rats. Dig Dis Sci. 2008;53:1832-6.