

Left-sided chilaiditi: A rare case report

Solda chilaiditi: Nadir bir vaka sunumu

Ahmet Burak TOROS¹, Beşir KESİCİ², Barbaros ERDOĞAN³, Koray ARISOY⁴

Departments of ¹Gastroenterohepatology, ³Radiology and ⁴General Surgery, Medistate Kavacak Hospital, Istanbul

²Department of Gastroenterohepatology, Bahcesehir University, School of Medicine, Istanbul

Chilaiditi's syndrome refers to a medical condition in which Chilaiditi's sign is present - a radiological observation of a colonic interposition between the liver and the diaphragm. The syndrome is associated with other clinical symptoms. Here we report a case that is similar to Chilaiditi's syndrome but appeared on the left side. The splenic flexure was compressed by a normal spleen due to the malposition of the colon, located above and behind the spleen, which caused chronic constipation. To our knowledge, this is one of a few case reports of a left-sided, Chilaiditi-like, colonic interposition syndrome reported in the literature.

Key words: Non-Chilaiditi sign, colonic interposition.

Chilaiditi sendromu; kalın barsağın karaciğer ve diyafram arasına girmesinin radyolojik olarak görülmesi şeklindeki "Chilaiditi işareti" ile tanınan bir tıbbi durumdur. Burada, benzer interpozisyonun sağda değil de solda olduğu bir vakayı naklediyoruz. Dalağın arka ve üzerine konumlanan kalın barsağın splenik köşesine, yapısal olarak normal olan dalağın basısı sonucunda kronik kabızlık gelişmiştir. Bildiğimiz kadarıyla bu; solda oluşan, Chilaiditi benzeri kolonik interpozisyonun; literatürde bildirilen nadir örneklerindedir.

Anahtar kelimeler: Non-Chilaiditi işareti, kalın barsak interpozisyonu

INTRODUCTION

Chilaiditi's syndrome refers to a medical condition that is indicated by the presence of Chilaiditi's sign, a radiological observation of colonic interposition between the liver and the diaphragm, and which presents with other clinical symptoms. Chilaiditi syndrome is rare and therefore often misdiagnosed in clinical practice; however, it may be accompanied by a series of severe complications, such as bowel obstruction and perforation (1). Here we report a similar case that appeared on the left side. The splenic flexure was compressed by a normal spleen, due to the malposition of the colon, located above and behind the spleen, thus causing chronic constipation. To our knowledge, this is one of the few case reports of a left-sided, Chilaiditi-like, colonic interposition syndrome reported in the literature.

CASE REPORT

A 28-year old female patient evaluated in our outpatient clinic complained of fatigue and constipation. She had a history of cerebral palsy. Her blood tests revealed marked iron deficiency anemia. We performed a gastroscopy and colonoscopy to investigate the anemia and gastroscopy results reported a grade A reflux esophagitis-pangastritis

and duodenitis, with biopsies positive for Helicobacter pylori in the quick test. The colonoscopic examination detected dynamic pressure of a mass into the colonic lumen, moving up and down and therefore narrowing the passage at the splenic flexure localization (Figure 1). We thought this to likely be an enlarged spleen.

An abdominal CT (Computed tomography) with contrast was performed. Results showed that at the upper left quadrant of the abdomen, the colon segment called the splenic flexure was displaced, cranially transcending the splenic dome towards the left hemidiaphragm. The anatomical protrusion of the normal dome of the spleen abruptly decreased the caliber of the large bowel segment to nearly half the diameter, compared to that of the proximal and distal colon segments beyond this point, which was 5.6 cm distal and inferior to the splenic flexure. At this location, there was compression of the hump of the spleen to the colon segment due to the higher positioning of the splenic flexure (Figures 2 and 3).

The spleen had normal dimensions and was in its normal localization but the left upper portion (splenic flexure) of the colon was located above and behind the spleen in an abnormal manner, causing the normal spleen to exert

Correspondence: Ahmet Burak TOROS
Emek Mah. Ordu cad. KentLife sitesi A3-3 Blok D: 53 Sancaktepe, Istanbul,
Fax: +90 216 617 00 23
E-mail: aburaktoros@yahoo.com

Manuscript: 23.02.2015 • **Accepted:** 02.03.2015

constant pressure on the left colon, thereby functionally narrowing the passage and causing chronic constipation. Since the whole abdominal CT revealed no free-gas appearance we did not take an erect chest X-Ray.

A surgical consult was done but no surgical intervention (splenectomy, segmental colon resection, colopexy and splenopexy etc) was advised, the clinical diagnosis still remaining unnamed.

The patient was started on conservative medical therapy and diet, as follows-drinking a minimum of 2 liters of water daily, consuming home-made vegetable meals and fruits and following a fiber-rich diet, with laxatives at needed, etc. The patient's condition has improved and routine follow-up is planned.

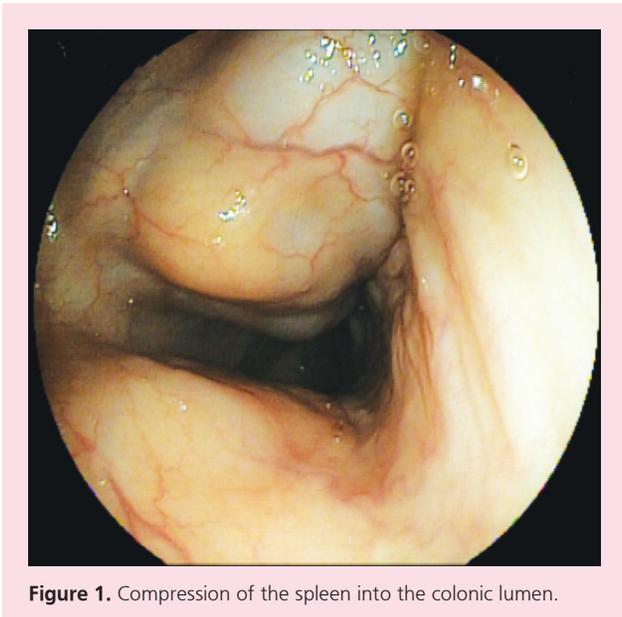


Figure 1. Compression of the spleen into the colonic lumen.

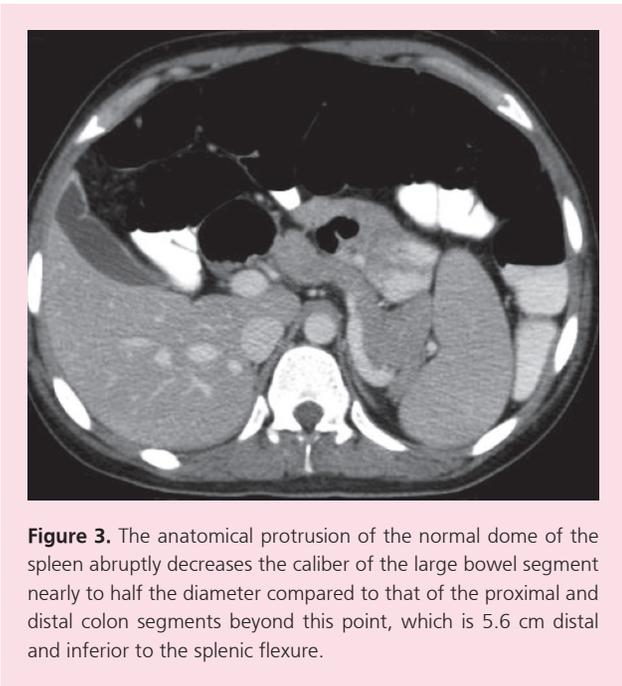


Figure 3. The anatomical protrusion of the normal dome of the spleen abruptly decreases the caliber of the large bowel segment nearly to half the diameter compared to that of the proximal and distal colon segments beyond this point, which is 5.6 cm distal and inferior to the splenic flexure.

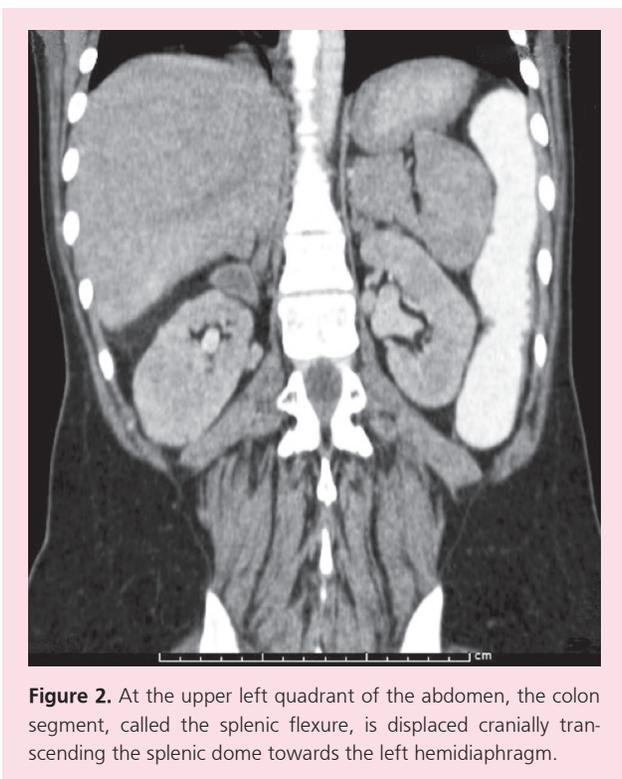


Figure 2. At the upper left quadrant of the abdomen, the colon segment, called the splenic flexure, is displaced cranially transcending the splenic dome towards the left hemidiaphragm.

DISCUSSION

Intestinal interposition is a medical condition where a segment of the bowel is temporarily or permanently interposed between two organs, for example - the liver and the diaphragm, the spleen and the diaphragm, the spleen and the left kidney, or the stomach and the pancreas. Among these, the hepatodiaphragmatic interposition is termed Chilaiditi sign, and the others are termed non-Chilaiditi sign (2).

Normally, suspensory ligaments and fixation of the colon impede the interposition of the colon between the liver and the diaphragm. However, various factors have been implicated that result in the pathological interposition of the colon, including hepatic, intestinal, diaphragmatic and other miscellaneous causes (3). Additional factors include those relating to the intestines, such as megacolon, an elongated/hypermobility colon with constipation, absence/laxity/elongation of the ligament suspending the transverse colon, abnormal gas accumulation due to aerophagia (4).

It is exceptionally rare for this condition to cause bowel

obstruction or require surgical correction (5). Interventions are not required for asymptomatic patients with Chilaiditi sign and the treatment is usually conservative, and includes bed rest, nasogastric decompression, fluid supplementation, enema, laxatives and the discontinuation of offending medications (Psychotropic medications etc) (6). When conservative treatment fails, the intestinal obstruction, such as volvulus, intestinal ischemia or intestinal perforation, cannot be alleviated, and thus, surgical intervention is required (7). Surgical interventions include segmental colon resection, colopexy and hepatoxexy (8).

In the present case, the patient exhibited a colonic interposition on the left side of the colon, concerning the splenic flexure. Although normal in size and localization, the spleen inevently compressed the interpositioned colon, causing chronic constipation. The patient was treated with conservative measures and is doing well.

To our knowledge, this is one of a few case reports of a left-sided Chilaiditi to be reported in the literature. We hope that additional case studies are published in the future to add to the body of knowledge on the nature of this anomaly.

REFERENCES

1. Weng WH, Liu DR, Feng CC, Que RS. Colonic interposition between the liver and the left diaphragm-management of Chilaiditi syndrome: A case report and literature review. *Oncol Lett* 2014;7:1657-60.
2. Bredolo F, Esposito A, Casiraghi E, et al. Intestinal interposition: the prevalence and clinical relevance of non-hepatodiaphragmatic conditions (non-Chilaiditi forms) documented by CT and review of the literature. *Radiol Med* 2011;116:607-19.
3. Oh SN, Rha SE, Byun JY, et al. Chilaiditi syndrome caused by Fitz-Hugh-Curtis syndrome: multidetector CT findings. *Abdom Imaging* 2006;31:45-7.
4. Wang DD, Wang ZL, Qiao HQ. One case report of Chilaiditi syndrome. *Zhonghua Wei Chang Wai Ke Za Zhi* 2012;5:447.
5. Williams A, Cox R, Palaniappan B, Woodward A. Chilaiditi's syndrome associated with colonic volvulus and intestinal malrotation: A rare case. *Int J Surg Case Rep* 2014;5:335-8.
6. Lohr CE, Nuss MA, McFadden DW, Hogg JP. Laparoscopic management of Chilaiditi's syndrome. *Surg Endosc* 2004;18:348.
7. Saber AA, Boros MJ. Chilaiditi's syndrome: what should every surgeon know? *Am Surg* 2005;71:261-3.
8. Blevins WA, Cafasso DE, Fernandez M, Edwards MJ. Minimally invasive colopexy for pediatric Chilaiditi syndrome. *J Pediatr Surg* 2011;46:e33-5.