Cirugía y Cirujanos. 2017;85(5):424–427

CIRUGÍA y CIRUJANOS
Órgano de difusión científica de la Academia Mexicana de Cirugía
Fundada en 1933
www.amc.org.mx www.elsevier.es/circir

CLINICAL CASE

Adult intestinal malrotation associated with intestinal volvulus☆

Ernesto Hernando-Almudí[a,*], Rafael Cerdán-Pascual[a], Cristina Vallejo-Bernad[a], Joaquín Martín-Cuartero[b], María Sánchez-Rubio[a], Carmen Casamayor-Franco[a]

[a] *Servicio de Cirugía General, Hospital Universitario Miguel Servet, Zaragoza, Spain*
[b] *Servicio de Radiología, Hospital Universitario Miguel Servet, Zaragoza, Spain*

Received 4 April 2016; accepted 17 May 2016
Available online 1 December 2017

KEYWORDS
Intestinal malrotation;
Intestinal volvulus;
Intestinal obstruction

Abstract
Background: Intestinal malrotation is a congenital anomaly of the intestinal rotation and fixation, and usually occurs in the neonatal age.
Objective: Description of a clinical case associated with acute occlusive symptoms.
Clinical case: A case of intestinal malrotation is presented in a previously asymptomatic woman of 46 years old with an intestinal obstruction, with radiology and surgical findings showing an absence of intestinal rotation.
Conclusions: Intestinal malrotation in adults is often asymptomatic, and is diagnosed as a casual finding during a radiological examination performed for other reasons. Infrequently, it can be diagnosed in adults, associated with an acute abdomen.

PALABRAS CLAVE
Malrotación intestinal;
Vólvulo intestinal;
Obstrucción intestinal

Malrotación intestinal en adulto asociada a vólvulo intestinal

Resumen
Antecedentes: La malrotación intestinal es una anomalía congénita de la rotación y fijación intestinal, que se presenta generalmente en la edad neonatal.
Objetivo: Descripción de un caso clínico asociado a un cuadro oclusivo agudo.

PII of original article: S0009-7411(16)30046-9
☆ Please cite this article as: Hernando-Almudí E, Cerdán-Pascual R, Vallejo-Bernad C, Martín-Cuartero J, Sánchez-Rubio M, Casamayor-Franco M. Malrotación intestinal en adulto asociada a vólvulo intestinal. Cirugía y Cirujanos. 2017;85:424–427.
* Corresponding author at: Avenida de Madrid 191, 4B, 50017 Zaragoza, Spain. Tel.: +34 9765 32171/+34 6179 23385.
E-mail address: ernestohernando@gmail.com (E. Hernando-Almudí).

Caso clínico: Presentamos el caso de una mujer de 46 años, previamente asintomática, atendida por un cuadro de obstrucción intestinal, con el hallazgo radiológico y quirúrgico de una ausencia de rotación intestinal.
Conclusiones: La malrotación intestinal en el adulto, frecuentemente es asintomática, y se diagnostica de una forma casual, en el curso de una exploración radiológica realizada por otra causa. De forma infrecuente puede diagnosticarse en adultos, asociado a un cuadro de abdomen agudo.

Background

The term Intestinal malrotation may be defined as: a congenital anomaly of the intestinal rotation and fixation during the development of the foetus. A great variety of anomalies exist and these may remain asymptomatic throughout life or be accompanied by acute abdomen, generally in the form of associated intestinal volvulus.[1]

Changes in embryological intestinal development may occur in any of its phases and may be grouped in accordance with the corresponding development stage[1]:

1. Non-rotation: here the small intestine is located on the right of the abdomen. The distal ileum crosses the midline to the caecum, located on the midline.
2. Incomplete rotation: the intestine occupies an intermediate position between non rotation and standard layout.
3. Inverse rotation: the duodenum crosses in front of the superior mesenteric artery, and the colon goes behind it. The duodenum is therefore in front, the superior mesenteric artery is behind it and behind this is the transverse colon.

In general malposition of the intestine in itself does not lead to problems, but it is often associated with bad intestinal adherence which may predispose to intestinal volvulus.

Clinical case

A patient aged 46 with no clinical history of note, presented at the emergency department with a three-day history of repeated vomiting and absence of bowel movements. The patient had previously presented at a hospital on 2 occasions, but without any organic causes. On this occasion symptoms included abdominal pain of epigastric origin, which was later diffuse. On examination the abdomen was found to be swollen and slightly painful, without peritoneal irritation.

Blood count was normal, biochemical studies revealed a slight increase in urea and creatine and a PCR of 2.4. A simple X-ray of the abdomen showed swelling of the small intestine loops, compatible with a partial bowel obstruction.

The patient was admitted to the service of digestive medicine and following exacerbation of pain during the next few hours, computed axial tomography (CAT) of the abdomen was requested. This showed swelling of the small intestine loops in the right abdomen, displacing the caecum to a posterior and central position (Fig. 1). There was also abundant free fluid indicative of loop impairment and focused grouping of mesenteric vessels, suggestive of internal hernia or torsion (Fig. 2). The radiologist suggested a primary diagnosis of pericaecal internal hernia. Retrospectively an inversion of mesenteric vessels was observed (Fig. 3).

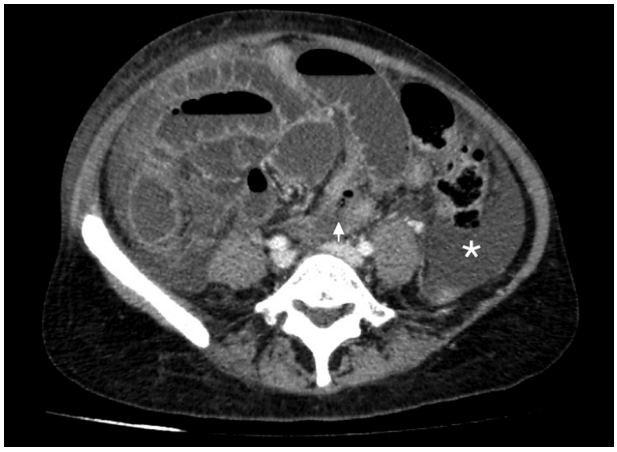

Figure 1 Intravenous contrast enhanced computed tomography axial imaging of the abdomen. Dilation of small intestine loops and presence of ascitic fluid (asterisk). Abnormal position of caecum, located mid line (arrow).

A surgical assessment was requested and on examination the patient presented with a very swollen, diffusely painful abdomen, low peristalsis and considerable compromise of the patient's general health status.

Emergency surgery was performed, with an exploratory laparotomy, which revealed the beginning of an irreversible intestinal ischaemia of 150 cm of ileum and a large herniated sac in the right abdomen, with the caecum in medial position and almost 1 l of intra-abdominal fluid.

The herniated sac which contained dilated jejunum was opened and resected and we confirmed the existence of an intestinal malrotation existing from the angle of Treitz to the left of the mesenteric vessels, in addition to an intestinal volvulus (Figs. 4 and 5).