**Scholars Journal of Medical Case Reports**
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

**Visceral Surgery**

# Primary Internal Hernia Causing Small Bowel Obstruction in a 57-Year-Old Woman with A Virgin Abdomen: A Case Report and Review of the Literature

Benjelloune Kenza Touimi[1], El Mjabber Marwa[1], Berrada Othmane[2]*, Bouali Ichrak[1], Ettaoussi Abdelhak[1], Majd Abdessamad[1], Kamal Khadija[1], Bouali Mounir[1], El Bakouri Abdelilah[1], El Hattabi Khalid[1]

[1]Department of Visceral Surgery, CHU Ibn Rochd, Casablanca, Morocco
[2]Department of Visceral Surgical Emergencies, Ibn Rochd University Hospital, Faculty of Medicine and Pharmacy of Casablanca, Hassan II University, Casablanca, Morocco

**DOI:** https://doi.org/10.36347/sjmcr.2026.v14i11.010 | **Received:** 05.09.2026 | **Accepted:** 02.11.2026 | **Published:** 03.11.2026

***Corresponding author:** Berrada Othmane
Department of Visceral Surgical Emergencies, Ibn Rochd University Hospital, Faculty of Medicine and Pharmacy of Casablanca, Hassan II University, Casablanca, Morocco

**Abstract** **Case Report**

***Introduction.*** Internal hernia (IH) is a rare cause of small bowel obstruction (SBO) that can progress rapidly to strangulation and is hard to diagnose in a virgin abdomen. ***Case presentation.*** A 57-year-old woman with no medical or surgical history presented with two days of obstipation, without pain or vomiting. Transit resumed spontaneously after one day. A first CT showed SBO with a transition zone in the right iliac fossa, and a second CT showed persistent obstruction by agglutinated loops enclosed in a pseudo-sac with mesenteric convergence, suggesting an IH. Laparoscopy found a sac-enclosed cluster of small bowel loops 70 cm from the ileocecal junction. Dissection was unsafe and the procedure was converted to laparotomy, with repair of the hernia and biopsy of the sac, which showed fibro-inflammatory tissue. The bowel was viable, no resection was needed, and recovery was uneventful. ***Conclusion.*** IH should be considered in any adult with SBO and no surgical history, even when symptoms regress. Persistent clustered loops with a pseudo-sac on repeat CT justify early exploration, and conversion is appropriate when laparoscopic dissection is unsafe.

**Keywords:** Internal hernia; small bowel obstruction; computed tomography; laparoscopy; conversion.

**Copyright © 2026 The Author(s):** This is an open-access article distributed under the terms of the Creative Commons Attribution **4.0 International License (CC BY-NC 4.0)** which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

## INTRODUCTION

An internal hernia (IH) is the protrusion of abdominal viscera, most often small bowel, through a peritoneal or mesenteric aperture into a compartment of the abdominal or pelvic cavity [1]. It accounts for 0.5% to 5.8% of small bowel obstructions (SBO) [2], but it behaves as a closed-loop obstruction, with a risk of strangulation within a short interval and mortality exceeding 50% in older series [1,2]. Most current cases follow bariatric or transplant surgery [2], whereas a primary IH in a virgin abdomen is rarely suspected before operation [4,5]. Computed tomography (CT) is the first-line examination, but an IH can be misread as an adhesive obstruction [3,6]. We report a primary sac-enclosed IH in a woman with no surgical history, whose painless and apparently regressive obstruction delayed the diagnosis.

## CASE PRESENTATION

A 57-year-old woman with no medical or surgical history presented with two days of obstipation, with no vomiting, abdominal pain or bleeding. She was afebrile, with asthenia and anorexia. The abdomen was soft and slightly distended, and the admission laboratory tests were normal. Transit resumed spontaneously after one day.

A first CT scan (Fig. 1) showed diffuse small bowel distension (38 mm) with air–fluid levels, a collapsed colon and a transition zone in the right iliac fossa, with discrete fat infiltration but no effusion or pneumatosis. An adhesive band or an IH was suspected. A second CT after resumption of transit (Fig. 2) showed regression of the upstream distension (35 mm) but persistence of the transition zone, formed by agglutinated loops surrounded by a dense pseudo-sac with

convergence of the mesenteric pedicle. There was no defect of parietal enhancement, effusion or pneumoperitoneum, and a probable IH was diagnosed.

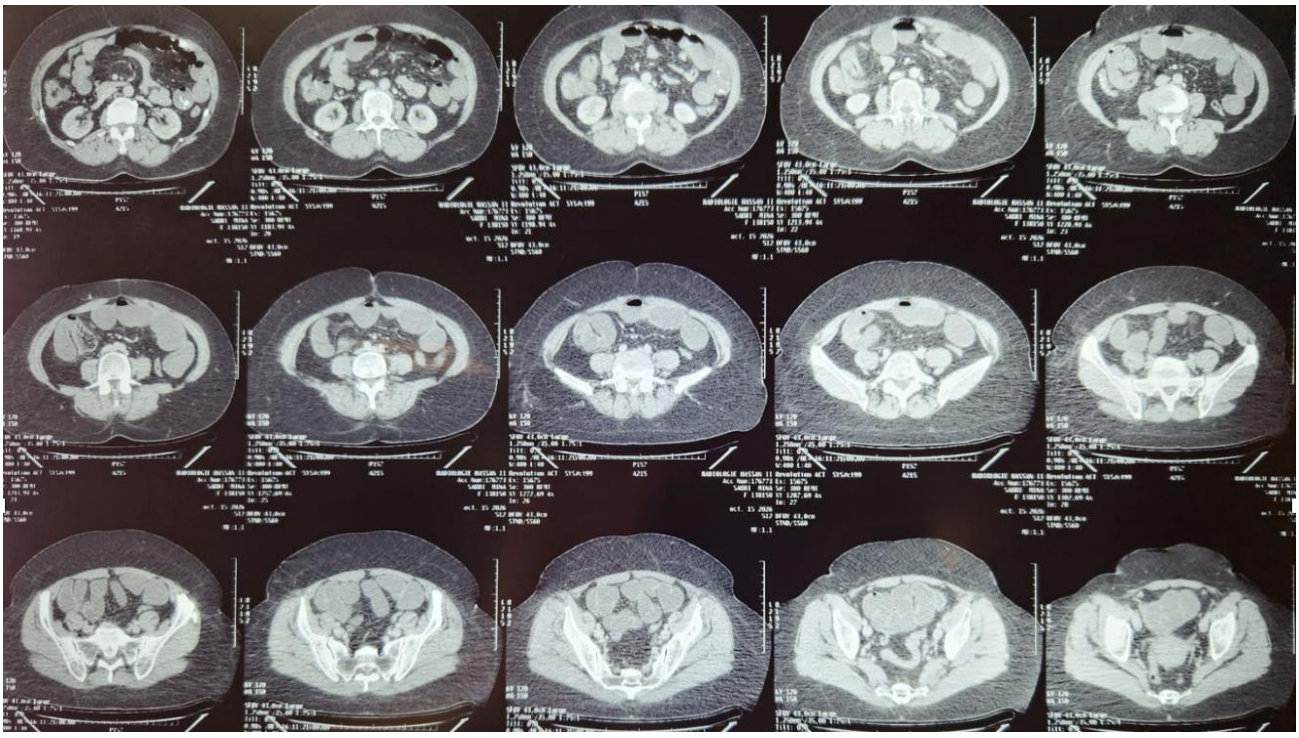


**Figure 1: Initial CT scan (axial film montages). Diffuse small bowel distension (38 mm) with air–fluid levels and collapsed colon. Transition zone in the right iliac fossa with discrete fat infiltration, without effusion or pneumatosis**

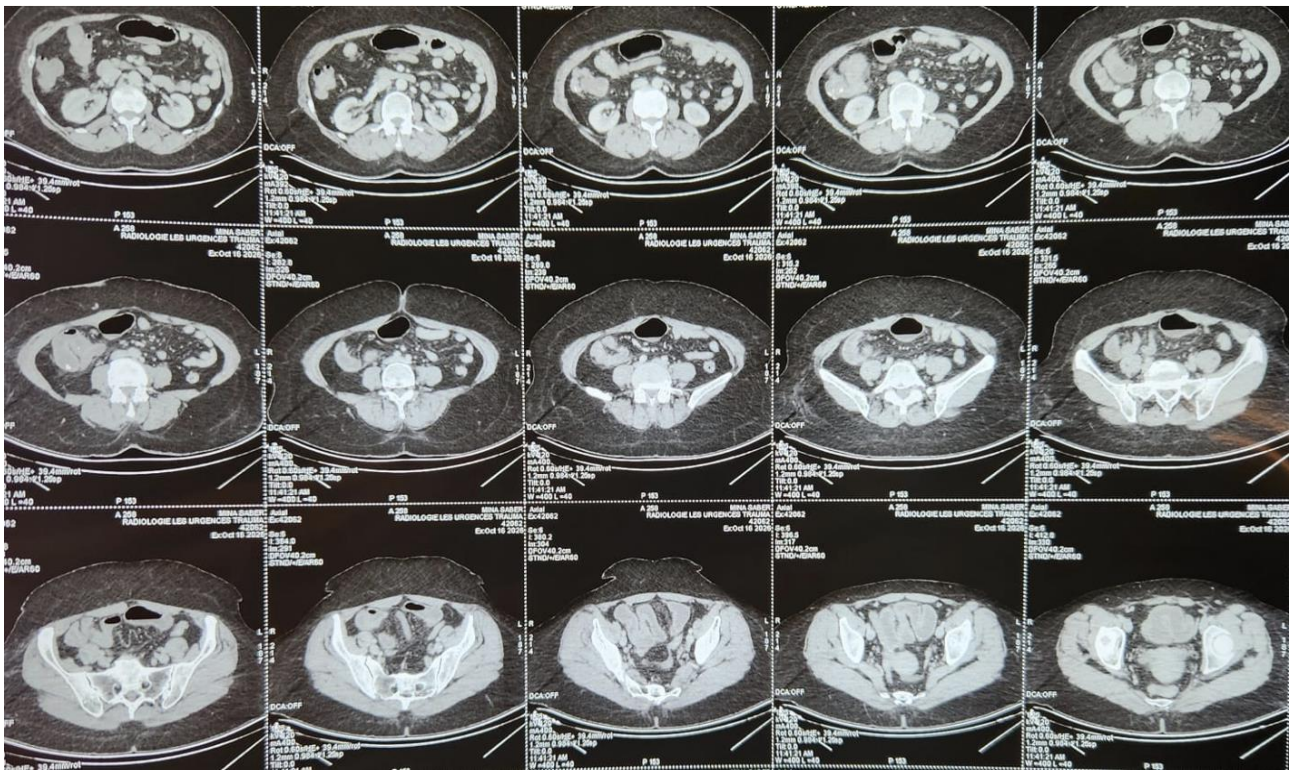


**Figure 2: Follow-up CT scan after resumption of transit. Regression of the upstream distension (35 mm versus 38 mm). Agglutinated loops enclosed in a dense pseudo-sac in the right iliac fossa, with convergence of the mesenteric pedicle and no defect of parietal enhancement**

Given the persistent transition zone, the patient underwent surgical exploration. Laparoscopy showed a thin layer of serous fluid and agglutinated loops in the right iliac fossa, covered by a peritoneal sac, 70 cm from the ileocecal junction, with 4 cm upstream distension and a collapsed downstream loop. Dissection was judged dangerous and the procedure was converted to a midline laparotomy, which allowed the herniated segment to be exteriorized (Fig. 3). The hernia was repaired and the sac was biopsied. The bowel was viable after reduction and no resection was required. Histology of the sac showed fibro-inflammatory tissue. The postoperative course was uneventful, with early resumption of transit and oral feeding, and the patient was discharged in the following days without complications.



**Figure 3: Intraoperative view after conversion to laparotomy: the herniated small bowel segment, dilated and congested, with subserosal petechiae, fibrous strands and the mesentery gathered at the center of the cluster. The bowel was viable after reduction**

## DISCUSSION

The presentation of IH is nonspecific, with intermittent obstruction, diffuse symptoms and few physical findings [7]. Our patient was painless, without vomiting, and her spontaneous resumption of transit, consistent with intermittent herniation and reduction, could easily have suggested a benign process. In a patient without surgical history, any SBO should raise the possibility of a congenital IH.

CT is the cornerstone of diagnosis, with a sensitivity and specificity for SBO of 94% to 100% and 90% to 95% [1]. Signs common to all IH are SBO, clustering of loops, and crowded, engorged mesenteric vessels [5]. Our second scan showed a sac-like cluster with convergence of the mesenteric pedicle, which echoes the mesenteric swirl, the best single predictor of IH after gastric bypass (sensitivity 61% to 83%, specificity 67% to 94%) [8]. The first scan showed only a transition zone, compatible with an adhesive band, a recurrent pitfall in pericecal and paracecal hernias [3,6]. When the transition zone persists, repeating or re-reading the CT with an IH in mind is justified.

Operating despite clinical improvement was justified by the closed-loop mechanism, in which ischemia can follow obstruction within a short interval [1]. Several CT signs, including mesenteric fluid, independently predict bowel necrosis in closed-loop SBO [9]. The absence of parietal enhancement defect, pneumoperitoneum and effusion on our second scan was reassuring but cannot exclude a threatened loop.

Laparoscopy is increasingly used for IH, with successful repairs reported for pericecal, adhesion-related, mesocolic and supravesical hernias [4,6,10]. Guidance on adhesive SBO limits the absolute contraindications to those related to pneumoperitoneum [10], but the technique is demanding when the bowel is

distended or landmarks are obscured, and conversion should not be seen as a failure [11,12]. In our patient, the agglutinated loops made safe dissection impossible, as in a reported intramesenteric hernia converted to laparotomy [7]. Treatment depends on the type of hernia and includes reduction with closure of the orifice, sac resection, or detachment of the sac without defect repair [7,13]. In our patient, histology of the sac showed fibro-inflammatory tissue only. This finding is nonspecific and does not prove a congenital origin: it may reflect an acquired inflammatory membrane, or a congenital sac made fibrotic by repeated incarceration, which would fit the intermittent course. The limitations of this report are its single-patient design and the absence of an assignable anatomical subtype.

## CONCLUSION

Primary internal hernia should be considered in every adult with small bowel obstruction and no surgical history, even when symptoms are mild or regressive. A persistent transition zone with clustered loops, a pseudo-sac and mesenteric convergence on repeat CT should prompt early exploration. Laparoscopy is a valid first step, and conversion to laparotomy is a safe choice when dissection is hazardous.

**Declarations**

**Conflicts of interest**

The authors declare no conflict of interest.

**Author contributions**

[Benjelloune Kenza Touimi, El Mjabber Marwa, Berrada Othmane, Bouali Ichrak, Ettaoussi Abdelhak, Majd Abdessamad, Kamal Khadija, Bouali Mounir, El Bakouri Abdelilah, El Hattabi Khalid]: manuscript drafting, literature review, and final approval of the submitted version. All authors read and approved the final manuscript.

**Acknowledgments**

The authors thank the surgical and pathology teams involved in the care of this patient.

## REFERENCES

1. Lanzetta MM, Maggialetti N, *et al.,* Internal hernias: a difficult diagnostic challenge. Review of CT signs and clinical findings. Acta Biomed. 2019;90(5-S):20-37.
2. Martin LC, Merkle EM, Thompson WM. Review of internal hernias: radiographic and clinical findings. AJR Am J Roentgenol. 2006;186(3):703-17.
3. Laparoscopic management of para-caecal hernia with small bowel obstruction: a case report. Cureus. 2023. PMC10461410.
4. Internal hernia through an idiopathic transverse mesocolon defect treated by laparoscopic surgery: a case report. Int J Surg Case Rep. 2025. doi: 10.1016/j.ijscr.2025.111701.
5. Blachar A, Federle MP, Dodson SF. Internal hernia: clinical and imaging findings in 17 patients with emphasis on CT criteria. Radiology. 2001;218(1):68-74.
6. Successful laparoscopic management of pericaecal hernia causing small bowel obstruction. Cureus. 2023. PMC9993124.
7. Internal abdominal hernia. Tidsskr Nor Legeforen. 2017 (Medisinen i bilder).
8. Lockhart ME, Tessler FN, Canon CL, *et al.,*Internal hernia after gastric bypass: sensitivity and specificity of seven CT signs with surgical correlation and controls. AJR Am J Roentgenol. 2007;188(3):745-50.
9. CT signs for predicting bowel necrosis in closed-loop small bowel obstruction. Radiology. doi:10.1148/radiol.231710.
10. Murad *et al.,*Laparoscopic management of small bowel obstruction caused by an adhesive internal hernia following open appendicectomy: a case report. Cureus. 2024;16(12):e75091. doi:10.7759/cureus.75091.
11. Masquerading as adhesions: left paraduodenal hernia, a congenital cause of small bowel obstruction. N Z Med J. 2026;139(1633).
12. Laparoscopic surgery for two patients with strangulated transomental hernias. Int J Surg Case Rep. 2020. PMC7080934.
13. Small bowel obstruction caused by sigmoid mesocolic hernia. J Surg Case Rep. 2014;2014(5):rju036.