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Cecal Volvulus Within the Etiological Spectrum of Intestinal Obstruction in Adults Admitted to General Surgery: A Single-center Retrospective Cohort Study

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Abstract

Aim: To describe the etiological distribution of acute intestinal obstruction among adults admitted to general surgery, the anatomical distribution of volvulus, and the characteristics of the cecal volvulus subgroup.

Materials and Methods: Adults admitted to the General Surgery Clinic of University of Health Sciences Türkiye, Ankara Etlik City Hospital, via the emergency department or by direct hospitalization, with acute intestinal obstruction or ileus between October 2022 and October 2025 were retrospectively analyzed. The cohort was classified by etiology, and volvulus cases were categorized as cecal or non-cecal. The cecal volvulus subgroup was analyzed descriptively, without inferential statistics.

Results: Among 1.316 patients (696 male; mean age 62.7±18.3 years), adhesive ileus was the most common etiology (861, 65.4%), and volvulus was identified in 109 patients (8.3%): 105 non-cecal and 4 cecal. The four cecal volvulus patients were aged 22-83 years; three had a neurological comorbidity. The original computed tomography (CT) report identified cecal volvulus in two patients. One preoperative endoscopic detorsion attempt was unsuccessful. All four underwent open resection; the two with ischemia and necrosis received a stoma, and the other two received a primary anastomosis. One 83-year-old patient died within 90 days from postoperative cardiopulmonary complications.

Conclusion: In this cohort of surgically admitted patients with intestinal obstruction, cecal volvulus was uncommon. The descriptive findings in this four-patient subgroup are hypothesis-generating and consistent with recommendations in the literature that the anatomical site of volvulus be explicitly reported on CT.

Keywords: Cecal volvulus, intestinal obstruction, emergency surgery, computed tomography, sigmoid volvulus, diagnostic delay

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Introduction

Intestinal obstruction is a common surgical emergency requiring rapid clinical assessment and systematic etiological workup. Depending on whether the origin is mechanical or functional, the clinical spectrum varies considerably (1). Adhesive ileus, colorectal tumor obstruction, hernia, paralytic ileus, and volvulus are the principal etiologies, each requiring a distinct diagnostic and therapeutic approach (2). Accordingly, in the emergency setting, the diagnosis of "ileus" or "intestinal obstruction" should not be regarded as a definitive endpoint, but rather as a starting point from which the underlying etiology must be systematically investigated (1).

Volvulus is a rare but surgically critical cause of intestinal obstruction (3). When characterized by axial rotation around the mesenteric axis, it may rapidly progress to ischemia and perforation. Sigmoid volvulus is the most prevalent type, occurring particularly in elderly patients with chronic constipation and neurological comorbidities (4). In selected stable patients, sigmoid volvulus can be managed with endoscopic detorsion. Cecal volvulus, by contrast, responds poorly to endoscopic treatment and is usually managed surgically (3).

The clinical presentation of cecal volvulus may overlap with sigmoid volvulus and nonspecific obstruction, creating a risk of diagnostic delay or misclassification (3). Abdominal pain, distension, vomiting, and cessation of flatus are common to both conditions, complicating etiological differentiation (4). However, the diagnostically and therapeutically critical question is not merely "is volvulus present?" but also "where is the volvulus located?" given that the management algorithms for sigmoid and cecal volvulus differ fundamentally.

Computed tomography (CT) is the primary imaging modality for etiological differentiation of intestinal obstruction and for determining the anatomical localization of volvulus (5). Systematic evaluation of the whirl sign, bird-beak appearance, ectopic cecal position, transition point, and ischemic findings is essential to distinguish cecal volvulus from sigmoid volvulus or nonspecific ileus. However, missed or inadequate CT classification has been reported (6).

The aim of this study was twofold. First, we aimed to describe the etiological distribution of acute intestinal obstruction among adults admitted to the general surgery department of a tertiary care center over a three-year period and the anatomical distribution of volvulus within this cohort. Second, we aimed to describe the cecal volvulus subgroup identified within this cohort in detail, providing complete patient-level clinical, radiological, operative, and outcome data. Because only four patients had cecal volvulus, this subgroup analysis was not designed to test hypotheses or estimate diagnostic performance, risk factors, or treatment effects; its findings are descriptive and hypothesis-generating, and are interpreted in the context of the existing literature.

Materials and Methods

Study Design and Ethics

This single-center retrospective cohort study was based on the archival records of the General Surgery Clinic of University of Health Sciences Türkiye, Ankara Etlik City Hospital and included 1.316 adults admitted to that department with intestinal obstruction. The primary analysis described the etiological distribution within the cohort and the anatomical distribution of volvulus; the secondary analysis provided a detailed evaluation of the cecal volvulus subgroup (n=4) identified within the cohort. No sample size or power calculation was performed because the cecal volvulus subgroup was too small for statistical inference. The study was reported in accordance with the STROBE guidelines. The study was approved by the Clinical Research Ethics Committee of University of Health Sciences Türkiye, Ankara Etlik City Hospital (decision number: AEŞH-BADEK2-2025-745, date: 30.12.2025) and conducted in accordance with the Declaration of Helsinki.

Patient Selection and Inclusion/Exclusion Criteria

Adult patients (≥18 years) admitted to the General Surgery Department between October 2022 and October 2025 with a diagnosis of intestinal obstruction or ileus, established on the basis of clinical, laboratory, and imaging findings, were retrospectively screened. Patients were admitted via the emergency department or by direct hospitalization. Because only patients admitted to the general surgery department were included, the cohort does not represent all patients who presented to the emergency department with obstruction; those managed by other departments, discharged from the emergency department, or transferred to other centers were not captured.

The following patients were excluded from the study:

- Pediatric patients under 18 years of age
- Patients with insufficient or incomplete archival records
- Patients in whom the diagnosis of obstruction could not be clinically confirmed
- Patients who underwent surgery at an external center and were subsequently transferred to our department

Etiological Classification

Included patients were assigned to one of the following mutually exclusive etiological categories on the basis of clinical, radiological, and operative findings:

- Adhesive ileus (mechanical obstruction secondary to adhesions)
- Colonic tumor obstruction
- Small bowel mass obstruction
- Volvulus
- Other and unidentifiable causes (including intussusception and bezoar)

No patient in the final cohort was assigned to a hernia-related category. Patients with obstruction caused by an incarcerated or strangulated external abdominal wall hernia were recorded under a separate hernia diagnosis in our departmental archive and were, therefore, not included in this obstruction cohort.

Volvulus Subgroup Analysis

Patients with volvulus were classified by anatomical location as cecal or non-cecal volvulus. The non-cecal group (sigmoid and other colonic volvulus) was not further subclassified by anatomical site. The diagnosis of cecal volvulus was confirmed by a combined assessment of CT findings, operative notes, and pathological results.

Data Collection

Demographic data, comorbidity profile, presenting symptoms, vital signs, laboratory parameters, imaging findings, operative findings, postoperative course, and outcomes were extracted from archival records. For cecal volvulus patients, original CT reports were recorded, and the responsible radiologist performed a secondary radiological re-evaluation. As this re-evaluation was non-blinded and conducted with awareness of the surgical diagnosis, a risk of confirmation bias was acknowledged. Detailed patient-level variables were analyzed for the four cecal volvulus patients; for the remaining patients, only the data required for etiological classification and demographic description were used.

Statistical Analysis

Data were analyzed using SPSS version 26.0 (IBM Corp., Armonk, NY, USA). For the overall cohort, continuous variables are expressed as mean ± standard deviation and categorical variables as frequencies and percentages. For the four patients with cecal volvulus, data are presented individually (Table 1) and summarized as counts (n/N) and medians (range) (Table 2); percentages are not reported for this subgroup, and no inferential statistical tests were performed. Ninety-day all-cause mortality was ascertained through routine outpatient follow-up and cross-referenced with national electronic health records. CT findings are reported as case-level observations, rather than as measures of diagnostic accuracy.

Results

General Cohort

A total of 1,316 patients who were admitted to our department with acute intestinal obstruction or ileus between October 2022 and October 2025 met the inclusion criteria. Of these, 696 (52.9%) were male and 620 (47.1%) were female, with a mean age of 62.7±18.3 years.

Regarding the etiological distribution, 861 patients (65.4%) presented with adhesive ileus, 297 (22.6%) with colonic tumor obstruction, 27 (2.1%) with small bowel mass obstruction, 109 (8.3%) with volvulus, and 22 (1.7%) with other or unidentifiable causes. Of the 22 patients in this last group, 18 were evaluated as having intussusception-related obstruction and 4 as having bezoar-related obstruction.

Volvulus Subgroup

Among the 109 patients with volvulus, 4 (3.7%) had cecal volvulus and 105 (96.3%) had non-cecal (sigmoid or other colonic) volvulus; the non-cecal group was not further subclassified by anatomical site. No comparative analysis between the cecal and non-cecal groups was performed.

Cecal Volvulus Subgroup

Individual patient data are presented in Table 1 and summarized in Table 2. The four patients (two males and two females) were aged 22, 30, 57, and 83 years (median 43.5 years). Three patients had a neurological comorbidity: two had intellectual disability and one had epilepsy with cerebral palsy; the 83-year-old patient had none. Three patients had undergone abdominal surgery.

All four patients presented with abdominal pain and cessation of flatus and stool; vomiting was present in three patients and abdominal distension in two patients. Symptom duration before admission ranged from 1 to 4 days. All patients were hemodynamically stable on admission, and peritoneal signs were present in one patient.

CT was performed in all four patients. The original CT reports specified cecal volvulus in two patients; in the other two (Patients 1 and 3), the reports described obstructive or nonspecific ileus; cecal volvulus was diagnosed intraoperatively. The whirl sign was reported in two patients. Endoscopic detorsion was attempted preoperatively in one patient (Patient 4) but was unsuccessful.

During surgery, a 360-degree rotation of the cecum was found in all four patients. Patients 1 and 2 had ischemia and necrosis, with gangrenous segments measuring 15 cm and 70 cm, respectively.

Table 1. Clinical, radiological, operative, and postoperative characteristics of patients with cecal volvulus (n=4)				
Variable	**Patient 1**	**Patient 2**	**Patient 3**	**Patient 4**
Demographics and comorbidities				
Age (years)	83	22	57	30
Sex	Male	Male	Female	Female
BMI (kg/m^2)	24.1	14.8	32.0	-
Neurological comorbidity	-	Epilepsy, cerebral palsy	Intellectual disability	Intellectual disability
Hypertension	No	No	Yes	No
Diabetes mellitus	No	No	No	No
Cardiac failure	No	No	No	No
COPD	No	No	No	No
Malignancy history	No	No	No	No
Prior abdominal surgery	Yes	Yes	Yes	No
Prior surgery type	Inguinal hernia repair	Gastric surgery	Nephrectomy	-
Anticoagulant use	No	No	No	No
Steroid use	No	No	No	No
Clinical presentation				
Symptom duration prior to admission (days)	3	2	1	4
Admission mode	**Referral (transfer)**	**Emergency**	**Emergency**	**Emergency**
Abdominal pain	Yes	Yes	Yes	Yes
Vomiting	Yes	No	Yes	Yes
Cessation of flatus and stool	Yes	Yes	Yes	Yes
Abdominal distension	Yes	No	Yes	No
Blood pressure (mmHg)	130/70	145/85	110/85	105/75
Heart rate (bpm)	93	82	110	105
Temperature (°C)	37.0	37.0	37.5	37.2
SpO_2 (%)	93	94	95	96
Hemodynamic status	Stable	Stable	Stable	Stable
Peritoneal signs	No	No	Yes	No
Laboratory findings at admission				
WBC ($\times10^3$/µL)	20.99	9.01	9.90	15.80
Neutrophil (%)	91.8	82.9	87.3	86.8
CRP (mg/L)	101.0	79.0	91.2	6.2
Lactate (mmol/L)	4.04	8.30	1.60	1.80
Sodium (mEq/L)	144	147	138	136
Potassium (mEq/L)	4.30	4.08	3.90	3.60
Chloride (mEq/L)	110	107	106	-
Creatinine (mg/dL)	1.03	0.40	1.10	0.50
pH	7.30	7.29	7.40	7.49
HCO_3 (mEq/L)	18.5	16.0	23.0	22.9
Base excess (mEq/L)	-7.3	-8.3	-3.9	-2.0
CT findings				
CT performed	Yes	Yes	Yes	Yes
Correct CT diagnosis of cecal volvulus	No*	Yes	No**	Yes
Whirl sign	No	Yes	No	Yes
Wall thickening	No	No	No	No
Free fluid on CT	No	Yes	Yes	Yes
Reduced contrast enhancement	No	No	No	No
Pneumoperitoneum	No	No	No	No
Mesenteric venous filling defect	No	No	No	No

Table 1. Continued

Variable	Patient 1	Patient 2	Patient 3	Patient 4
Operative findings and procedure				
Endoscopic detorsion attempted	No	No	No	Yes (failed)***
Cecal rotation (degrees)	360°	360°	360°	360°
Surgical approach	Open	Open	Open	Open
Bowel ischemia	Yes	Yes	No	No
Necrosis	Yes	Yes	No	No
Gangrenous segment length (cm)	15	70	-	-
Perforation	No	No	No	No
Intraoperative free fluid	No	Yes	No	Yes
Resection type	Ileocolic resection	Right hemicolectomy	Ileocolic resection	Ileocolic resection
Stoma formation	Yes (double-barrel)	Yes (end ileostomy)	No	No
Anastomosis type	-	-	Stapler	Stapler
Operation duration (min)	80	65	135	150
Postoperative course and outcomes				
ICU admission	Yes	Yes	Yes	Yes (brief observation)
ICU length of stay (days)	55	2	2	0
Postoperative intubation	Yes	No	No	No
Vasopressor requirement	Yes	No	No	No
First flatus (days)	1	3	4	5
First bowel movement (days)	1	3	5	8
Oral intake initiation (days)	Not resumed‡	3	6	4
Any complication	Yes	No	No	Yes
Clavien-Dindo grade	V****	-	-	IIIb†
Anastomotic leak	-	No	No	No
Surgical site infection	No	No	No	No
Postoperative ileus	No	No	No	No
Reoperation	No	No	No	Yes††
Hospital length of stay (days)	55	9	8	9
30-day mortality	No	No	No	No
90-day mortality	Yes	No	No	No
Recurrence of cecal volvulus	No	No	No	No
Stoma closure	No	No	N/A	N/A

*:Patient 1's CT report: "Diffuse calibration increase and air-fluid levels in the right mid and lower quadrant; max diameter 8 cm - obstructive ileus." Cecal volvulus confirmed intraoperatively.
**: Patient 3 CT report: "Dilated loop at midline level (~8 cm diameter) with air-fluid levels and collapsed distal loops - compatible with ileus. "Transition zone not identifiable due to absence of oral contrast." Cecal volvulus confirmed intraoperatively.
***: Patient 4: Endoscopic detorsion attempted preoperatively by gastroenterology; unsuccessful due to right-sided torsion anatomy. Emergency open surgery was performed subsequently.
****: Patient 1: Postoperative cardiopulmonary organ dysfunction requiring prolonged intensive care and progressing to death within 90 days (Clavien-Dindo Grade V; death attributable to these complications and advanced age).
†: Patient 4: Drain migration into the abdominal cavity was detected on postoperative day 6; an emergency laparotomy was performed for foreign body removal (Clavien-Dindo Grade IIIb).
††: Patient 4 reoperation: Drain removed via emergency laparotomy on postoperative day 6.
‡: Patient 1 did not resume oral intake; nutrition was provided enterally via a nasogastric tube from postoperative day 1 onward during the prolonged intensive care unit stay.
WBC: White blood cell count, CRP: C-reactive protein, CT: Computed tomography, ICU: Intensive care unit, COPD: Chronic obstructive pulmonary disease, BMI: body mass index

All patients underwent open surgical resection: ileocolic resection in three patients and right hemicolectomy in one patient. A stoma without an anastomosis was created in the two patients with ischemia and necrosis, and a stapled primary anastomosis was performed in the other two patients. Representative radiological and intraoperative findings are shown in Figure 1.

All four patients were admitted to the intensive care unit postoperatively for routine monitoring at the request of the

Table 2. Postoperative outcomes of cecal volvulus patients (n=4)

Outcome variable	Cecal volvulus patients (n=4)
Postoperative care	
Postoperative ICU admission (routine monitoring), n/N	4/4
ICU stay, median (range), days	2 (0-55)
Postoperative intubation, n/N	1/4
Vasopressor requirement, n/N	1/4
Gastrointestinal recovery	
First flatus, median (range), days	3.5 (1-5)
First bowel movement, median (range), days	4 (1-8)
Initiation of oral intake, median (range), days	4 (3-6)†
Complications	
Any complication, n/N	2/4
Highest Clavien-Dindo grade, n	IIIb: 1; V: 1*
Anastomotic leak, n/N	0/2
Surgical site infection, n/N	0/4
Postoperative ileus, n/N	0/4
Reoperation, n/N	1/4**
Hospital course	
Hospital length of stay, median (range), days	9 (8-55)
Excluding Patient 1 (prolonged ICU stay), median (range), days	9 (8-9)
Mortality and follow-up	
30-day mortality, n/N	0/4
90-day mortality, n/N	1/4
Recurrence of cecal volvulus, n/N	0/4
Stoma closure performed, n/N	0/2

*: Patient 4 experienced a Grade IIIb complication (reoperation for drain migration). Patient 1 died within 90 days due to postoperative cardiopulmonary complications (Clavien-Dindo Grade V).
**: Reoperation was performed in Patient 4 for drain migration (foreign-body removal via laparotomy). n/N: Number of patients with the outcome/number of patients at risk (anastomotic leak and stoma closure: two patients each), ICU: Intensive care unit.
†: Calculated for the three patients who resumed oral intake; Patient 1 did not resume oral intake

anesthesiology team; three were transferred to the ward within 48 hours, whereas Patient 1 required prolonged intensive care. Patient 1, an 83-year-old American Society of Anesthesiologists class 3 emergency (ASA 3E) transferred from another hospital after a 3-day symptom duration, with an admission lactate of 4.04 mmol/L and a 15-cm gangrenous segment, underwent stoma formation and died within 90 days from postoperative cardiopulmonary complications following prolonged intubation (Clavien-Dindo grade V). Patient 4 required reoperation on postoperative day 6 for intra-abdominal drain migration (Clavien-Dindo grade IIIb). The remaining two patients had no complications. Hospital length of stay ranged from 8 to 55 days (median 9 days); excluding Patient 1, it ranged from 8 to 9 days. No recurrence was observed.

Discussion

In this single-center cohort of 1.316 adults admitted to a general surgery department for acute intestinal obstruction or ileus over three years, adhesive ileus was the dominant etiology (861 patients, 65.4%), followed by colonic tumor obstruction (297, 22.6%), volvulus (109, 8.3%), small-bowel mass obstruction (27, 2.1%), and other or unidentifiable causes (22, 1.7%). Cecal volvulus was identified in four patients, all of whom underwent open resection. Because the study population was restricted to surgically admitted patients, these frequencies describe the case mix of a tertiary general surgery service rather than that of all emergency department presentations with obstruction. As emphasized in previous reviews, the diagnosis of "ileus" or "intestinal obstruction" should prompt systematic etiological clarification rather than be accepted as a final diagnosis (1,2,7).

The predominance of adhesive obstruction is consistent with the Bologna guidelines, which identify adhesions as the leading cause of mechanical small-bowel obstruction (2). The proportion of volvulus (8.3%) is higher than the rates reported in large Western datasets and closer to those described in regions where sigmoid volvulus is more prevalent (4,8). Regional differences in bowel habits, constipation burden, and anatomical predisposition have been proposed as explanations (4), although referral patterns to a tertiary center may also have contributed.

Of the 109 patients with volvulus, 4 (3.7%) had cecal volvulus. This sigmoid-dominant distribution differs from that of the US Nationwide Inpatient Sample and the classical Mayo Clinic series, in which cecal volvulus accounted for a substantially larger share of colonic volvulus (3,8,9). A low pretest probability of cecal volvulus in a sigmoid-dominant setting could influence how obstruction is initially interpreted; however, this hypothesis cannot be tested with the present data.

Current guidelines recommend endoscopic detorsion as the first-line approach for stable sigmoid volvulus, with resection reserved for failure, ischemia, or recurrence, whereas operative management is recommended for cecal volvulus (3,4,10). The management of our four patients was consistent with these recommendations: endoscopic detorsion was attempted in one patient before surgery but was unsuccessful; all four patients underwent resection. A single unsuccessful attempt cannot independently demonstrate the effectiveness or ineffectiveness of endoscopic treatment; the limited role of endoscopy in cecal volvulus is established by the existing literature rather than by

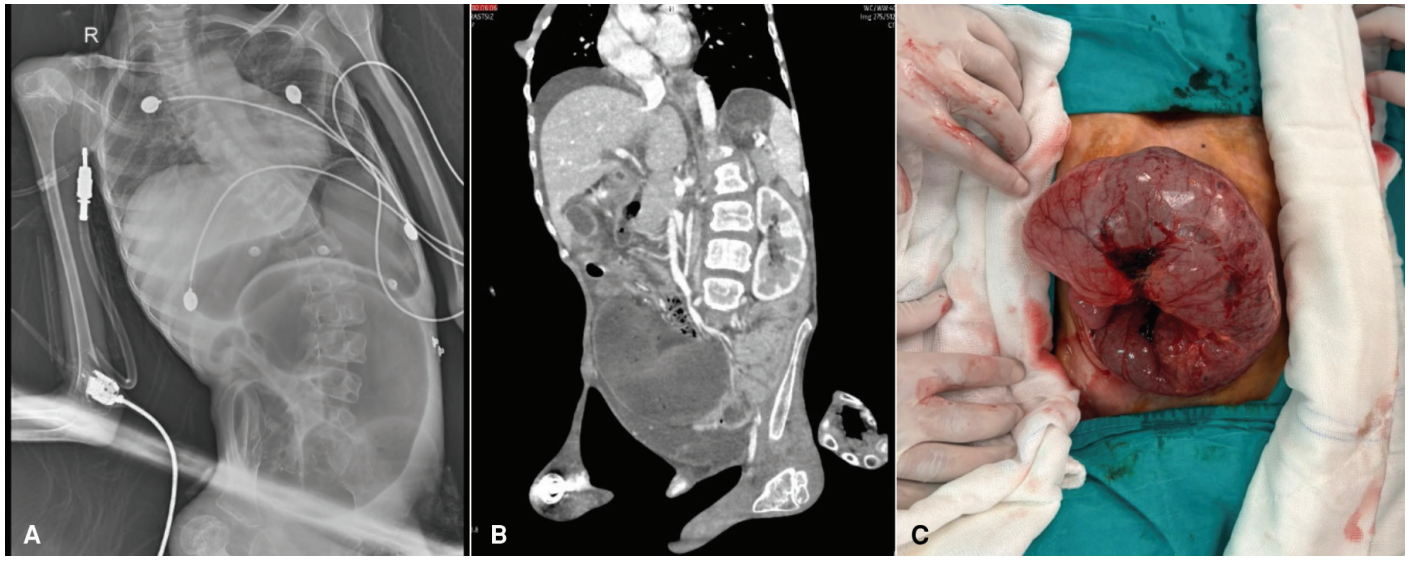


Figure 1. Representative radiological and intraoperative findings of cecal volvulus

(A) Plain abdominal radiograph showing a markedly dilated, ectopically positioned cecal loop suggestive of large-bowel obstruction. (B) Coronal abdominal computed tomography image demonstrating a displaced and distended cecum with findings compatible with cecal volvulus. (C) Intraoperative image showing a markedly distended and congested volvulized cecum, demonstrating the intraoperative appearance of cecal volvulus.

our data (3,10). The practical point illustrated by these cases is that, once volvulus is suspected, its anatomical site should be stated explicitly, because the recommended treatment pathways differ (4).

Three of the four patients had a neurological comorbidity (two had intellectual disability and one had epilepsy with cerebral palsy). Associations between cecal volvulus and neurological disease, impaired mobility, and altered bowel motility have been described in case reports (11-13). With four patients and no comparator group, our data cannot establish neurological comorbidity as a risk factor; this observation is reported solely to describe the case mix. The only patient without a neurological comorbidity was the oldest (83 years) and was also the only patient who died. Symptom duration before admission ranged from 1 to 4 days.

In two of the four patients, the original CT report did not specify cecal volvulus, describing obstructive or nonspecific ileus instead; in both patients, the diagnosis was established intraoperatively. The whirl sign was reported in two patients. Because the denominator was four and the secondary review was non-blinded, these observations do not constitute an assessment of diagnostic performance, sensitivity, or reliability of individual CT signs. Published series have described the CT features of cecal volvulus, including the whirl sign, ectopic cecal position, transition point, bird-beak configuration, and signs of ischemia (5,14,15), and have noted that obstruction may be reported without specification of the torsion site (6,16). In line with these reports and with recommendations on the structured communication of urgent imaging findings, explicitly stating the torsion site, the cecal position, and the presence or absence of ischemia in CT reports of suspected volvulus appears reasonable (17-19); the findings in our patients illustrate, but do not quantify, this point.

All four patients underwent open surgery. Laparoscopy was not selected because of the emergency setting, suspected ischemia, marked colonic distension, and limited working space (13). Laparoscopy may be feasible in selected stable patients, but open exploration is commonly preferred when bowel viability is uncertain (16).

Resection was performed in all four patients. A stoma without anastomosis was created in the two patients with ischemia and necrosis, and primary anastomosis was performed in the other two, reflecting individualized decisions based on bowel viability, physiology, and operative risk (20). Cecopexy has been associated with higher recurrence than resection in published series (21,22), and the choice among detorsion, cecopexy, cecostomy, and resection depends on bowel viability, patient condition, anatomy, and institutional practice (23). No recurrence was observed in our patients during follow-up.

One patient died within 90 days. This 83-year-old patient, classified as ASA 3E, was transferred from another hospital after a 3-day duration of symptoms, with an admission lactate of 4.04 mmol/L and a 15-cm gangrenous segment, and subsequently

died from postoperative cardiopulmonary complications after prolonged intubation. The most extensive gangrene in the series (70 cm) occurred in a 22-year-old patient who survived. A single death does not allow prognostic factors to be identified; larger series have reported advanced age, delayed presentation, bowel gangrene, and frailty as determinants of mortality after surgery for colonic volvulus (24-26).

We acknowledge that the principal clinical messages discussed above–the rarity of cecal volvulus, the importance of anatomical localization on CT, the different management of cecal and sigmoid volvulus, and the limited role of endoscopic detorsion in cecal volvulus–are already established in the literature and in current guidelines (3,4,10). The contribution of this study is therefore modest and descriptive. First, it provides a contemporary distribution of etiologies among 1.316 consecutive admissions for obstruction to a tertiary general surgery department in a region where sigmoid volvulus predominates. Second, it reports complete patient-level clinical, laboratory, radiological, operative, and outcome data for four cecal volvulus cases, together with their source denominator, which may be useful in future pooled analyses of this uncommon condition.

Study Limitations

This study has important limitations. First, only four patients had cecal volvulus; therefore, statistical inference was not possible, and all findings for this subgroup are descriptive and hypothesis-generating. Second, the study population comprised only patients who were admitted to the general surgery department at a single tertiary referral center; patients managed by other departments, discharged from the emergency department, or transferred elsewhere were not captured; therefore, the etiological frequencies may not apply to unselected emergency department populations. Third, the secondary CT review was non-blinded and conducted with knowledge of the operative diagnosis, introducing confirmation bias; the fact that two of four original reports did not specify cecal volvulus constitutes a case-level finding rather than a measure of diagnostic accuracy. Fourth, the 105 non-cecal volvulus cases were not subclassified by anatomical site, and detailed clinical and outcome data were not analyzed for these cases; therefore, no comparison between cecal and sigmoid volvulus could be made based on our data, and statements about their differing management rely on the existing literature. Fifth, because there was one death, two ischemic cases, and one endoscopic attempt, our interpretations regarding prognosis, CT reporting, and treatment selection are largely based on the literature. The retrospective single-center design limits generalizability. Prospective multicenter studies with structured CT reporting and standardized outcome capture are needed to characterize cecal volvulus more definitively.

Conclusion

Among 1.316 adults admitted to a general surgery department for intestinal obstruction, adhesive ileus was the most common etiology, and volvulus accounted for 8.3% of admissions. Cecal volvulus was identified in 4 of 109 patients with volvulus; all four underwent open resection, two required a stoma for ischemia and necrosis, and one 83-year-old patient died within 90 days.

The findings in the four patients with cecal volvulus are descriptive and hypothesis-generating, and do not permit conclusions regarding diagnostic performance, risk factors, or treatment effectiveness. They are consistent with existing guidelines that, once volvulus is suspected, its anatomical site should be explicitly determined and reported because the management of cecal and sigmoid volvulus differs. Larger prospective multicenter studies are needed.

Ethics

Ethics Committee Approval: The study was approved by the Clinical Research Ethics Committee of University of Health Sciences Türkiye, Ankara Etlik City Hospital (decision number: AEŞH-BADEK2-2025-745, date: 30.12.2025) and conducted in accordance with the Declaration of Helsinki.

Informed Consent: The requirement for informed consent was waived by the Clinical Research Ethics Committee due to the retrospective nature of the study.

Footnotes

Author Contributions

Surgical and Medical Practices: S.D., M.S.S., A.Y.K., F.Y., E.O., Concept: S.D., M.S.S., F.Y., B.B., L.S., Design: S.D., M.S.S., F.Y., H.D., Data Collection or Processing: S.D., M.S.S., A.Y.K., E.O., M.Ş., Analysis or Interpretation: S.D., A.Y.K., F.Y., B.B., M.Ş., L.S., Literature Search: S.D., M.S.S., A.Y.K., H.D., Writing: S.D., M.S.S., A.Y.K.

Conflict of Interest: Lukasz Szarpak is a member of the Editorial Board of the Eurasian Journal of Emergency Medicine. However, they were not involved in any stage of the editorial decision process for this manuscript. The editors who evaluated this manuscript are from different institutions. The other authors declared no conflict of interest.

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