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RESULTS OF MINIMALLY INVASIVE SURGICAL TREATMENT FOR CHRONIC COPROSTASIS IN PATIENTS WITH DOLICHOMEGACOLON: A COMPREHENSIVE REVIEW

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ABSTRACT

Background: Chronic coprostasis (chronic fecal impaction) in patients with dolichomegacolon represents a challenging clinical entity characterized by abnormal colonic elongation and dilatation. When conservative management fails, surgical intervention becomes necessary. Minimally invasive surgical (MIS) approaches have emerged as preferred techniques offering potential advantages over traditional open surgery.

Objective: This comprehensive review examines the outcomes of minimally invasive surgical treatment for chronic coprostasis in patients with dolichomegacolon, analyzing evidence from the past decade to provide clinical guidance for patient selection and surgical technique.

Methods: A systematic literature review was conducted using PubMed, Scopus, and Cochrane databases for publications from 2015-2025 using key terms including dolichocolon, megacolon, slow-transit constipation, laparoscopic colectomy, robotic surgery, and chronic constipation.

Results: Laparoscopic total colectomy with ileorectal anastomosis demonstrates favorable outcomes with patient satisfaction rates of 71-90%, reduced hospital stay (4-8 days), faster return of bowel function, and lower complication rates compared to open surgery. Robotic-assisted techniques show promise with

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improved visualization and lower conversion rates. Careful patient selection using colonic transit studies is critical for optimal outcomes.

Conclusions: Minimally invasive surgical approaches are safe and effective for treating chronic coprostasis in carefully selected patients with dolichomegacolon. Proper preoperative assessment and strict patient selection criteria are essential for achieving satisfactory long-term outcomes.

Keywords: Dolichomegacolon, chronic coprostasis, slow-transit constipation, laparoscopic colectomy, robotic surgery, minimally invasive surgery

INTRODUCTION

Chronic constipation affects approximately 14% of the adult population worldwide, causing significant impact on quality of life and healthcare utilization [1]. A subset of these patients suffer from slow-transit constipation (STC) associated with anatomical abnormalities including dolichocolon (abnormally long colon) and megacolon (abnormally dilated colon), collectively referred to as dolichomegacolon when both conditions coexist. These patients often experience chronic coprostasis—persistent fecal impaction that becomes refractory to medical management.

Dolichocolon is characterized by excessive colonic length, often with redundant loops, particularly affecting the sigmoid colon. When combined with colonic dilatation (megacolon), the resulting dysmotility leads to severe chronic constipation that significantly impairs quality of life [2]. Conservative treatment options including dietary modifications, laxatives, enemas, and biofeedback therapy are often ineffective in this patient population.

Surgical intervention has been considered for patients with medically refractory constipation since the early 20th century. The surgical approach to chronic constipation has evolved significantly, with colectomy and ileorectal anastomosis becoming the most commonly performed procedure [3]. The advent of minimally

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invasive surgical techniques, including laparoscopic and robotic approaches, has transformed the surgical management of these patients by offering reduced surgical trauma, faster recovery, and improved cosmetic outcomes.

The first laparoscopic colectomy was reported in 1991 by Jacobs et al., and since then, minimally invasive techniques have gained widespread acceptance in colorectal surgery [4]. For patients with dolichomegacolon and chronic coprostasis, laparoscopic surgery offers particular advantages given the benign nature of the condition and the generally younger patient population affected.

This review comprehensively examines the current evidence regarding minimally invasive surgical treatment for chronic coprostasis in patients with dolichomegacolon, including patient selection criteria, detailed surgical techniques, comparative outcomes, and complications.

DEFINITIONS AND PATHOPHYSIOLOGY

Dolichocolon and Megacolon

Dolichocolon refers to an abnormally elongated colon, often with redundant loops and excessive tortuosity. Diagnostic criteria typically include: sigmoid loop rising above the line between the iliac crests, transverse colon below this line, and extra loops at the hepatic and splenic flexures. A definitive diagnosis requires comprehensive imaging including barium enema and CT colonography [5]. The condition may be congenital or acquired, with the sigmoid colon most frequently affected.

Idiopathic megacolon/megarectum (IMB) is characterized by persistent bowel dilatation in the absence of organic obstruction. The condition can involve the entire colon, rectum, or both. The pathophysiology involves interstitial cells of Cajal abnormalities, enteric nervous system dysfunction, and smooth muscle changes that result in impaired colonic motility [5,6,7]. Histopathological findings may include reduced density of interstitial cells of Cajal, neuronal abnormalities, and smooth muscle degeneration.

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Slow-Transit Constipation

Slow-transit constipation (STC) is defined by delayed colonic transit time (>72 hours) as documented by radio-opaque marker studies, wireless motility capsule, or scintigraphy. The Rome IV criteria for functional constipation include fewer than 3 spontaneous bowel movements per week, hard stools, straining, and sensation of incomplete evacuation [7]. When STC occurs in the context of dolichomegacolon, the anatomical abnormalities compound the functional deficits, creating a particularly challenging clinical scenario.

Chronic Coprostasis

Chronic coprostasis represents the end-stage manifestation where persistent fecal impaction occurs despite all conservative measures. Patients may require repeated manual disimpaction, hospital admissions for nasogastric washouts, and experience life-threatening complications including perforation, toxic megacolon, and bowel obstruction. This refractory state serves as the primary indication for surgical intervention [8].

PREOPERATIVE ASSESSMENT AND PATIENT SELECTION

Careful patient selection is paramount for achieving optimal surgical outcomes. The 2017 CapaCiTY systematic review established evidence-based criteria that have been widely adopted for patient selection [3]. A cross-sectional study of 1,568 patients found that only 1.7% of chronically constipated patients met all selection criteria for colectomy after rigorous application of these recommendations [9]. This emphasizes the highly selective nature of surgical intervention for this condition.

Essential Diagnostic Workup

Colonic Transit Studies: Radio-opaque marker studies remain the gold standard for documenting slow transit. Retention of more than 20% of markers at 72-120

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hours indicates STC. The Sitz marker study involves ingestion of 20-24 radio-opaque markers with abdominal radiographs taken at day 5. This objective demonstration is an absolute requirement before considering surgical intervention [7]. Scintigraphy and wireless motility capsule provide alternative methods with ability to assess regional transit.

Anorectal Physiology Testing: High-resolution anorectal manometry and balloon expulsion testing are essential to exclude defecatory disorders. These tests evaluate anal sphincter function, rectoanal inhibitory reflex, and ability to evacuate. Biofeedback therapy should be attempted and failed before considering colectomy in patients with evacuation dysfunction [10].

Defecography: MR or fluoroscopic defecography identifies structural abnormalities including rectocele, intussusception, enterocele, excessive perineal descent, and megarectum that may influence surgical planning. This is particularly important as evacuation disorders must be addressed before or concurrent with colectomy.

Colonoscopy/Barium Enema: Essential to exclude organic pathology including malignancy, strictures, and inflammatory conditions. Additionally documents anatomical abnormalities characteristic of dolichomegacolon including redundant loops and colonic dilatation.

Psychological Evaluation: Screening for psychological comorbidities is important as depression, anxiety, and history of abuse have been associated with poor surgical outcomes. Patients should have realistic expectations and adequate coping mechanisms [11].

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Patient Selection Criteria

Indications for surgery include:

• Documented slow-transit constipation (>72 hours) on radio-opaque marker study
• Failed conservative management for >1 year including dietary modification, laxatives, and prokinetics
• Absence of defecatory disorders or successful treatment with biofeedback
• No significant psychiatric comorbidity
• Adequate understanding of expected outcomes and potential complications

Absolute and Relative Contraindications:

• Normal colonic transit time (absolute contraindication)
• Fecal incontinence (relative - St Mark's score >5)
• Untreated defecatory disorders
• Generalized gastrointestinal dysmotility
• Irritable bowel syndrome as predominant diagnosis
• Severe chronic abdominal pain as predominant symptom

MINIMALLY INVASIVE SURGICAL TECHNIQUES

The evolution of minimally invasive surgery has revolutionized the surgical management of chronic coprostasis in patients with dolichomegacolon. Multiple techniques are now available, each with specific indications, advantages, and limitations. The choice of procedure depends on patient factors, extent of colonic involvement, surgeon experience, and available resources.

Laparoscopic Total Colectomy with Ileorectal Anastomosis (TC-IRA)

Laparoscopic total colectomy with ileorectal anastomosis has emerged as the gold standard surgical approach for STC with dolichomegacolon. The procedure

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involves complete removal of the colon while preserving the rectum, with primary anastomosis between the terminal ileum and upper rectum [12].

Patient Positioning and Port Placement: The patient is positioned in modified lithotomy with arms tucked. Pneumoperitoneum is established using a Veress needle or open Hasson technique. A 10-12mm subumbilical port is placed for the camera. Additional ports include two 12mm ports (right lower quadrant and left lower quadrant) and two 5mm ports (right upper quadrant and suprapubic). Some surgeons prefer a 4-port technique with camera repositioning during different phases of the procedure.

Medial-to-Lateral Approach: The procedure begins with identification and division of the ileocolic pedicle. The mesentery is incised and the plane between the mesentery and retroperitoneum is developed using blunt dissection. This approach provides early vascular control and identification of the ureter and duodenum. The middle colic vessels are then identified and divided at their origin. The inferior mesenteric artery is divided, preserving the superior rectal artery when possible to maintain rectal blood supply [12,13].

Lateral Mobilization: Following medial mobilization, the lateral attachments are divided. The white line of Toldt is incised from the cecum to the sigmoid colon. The hepatic and splenic flexures are mobilized, taking care to avoid splenic injury. The omentum is separated from the transverse colon. Complete mobilization is confirmed when the entire colon is freely mobile to the midline.

Rectal Transection: The mesorectum is divided using an energy device (ultrasonic scalpel or vessel-sealing device) at the level of the sacral promontory. The upper rectum is transected using an endoscopic linear cutting stapler (45-

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60mm). One or two firings may be required depending on bowel diameter. The anvil of a circular stapler (28-31mm) is secured in the terminal ileum.

Specimen Extraction and Anastomosis: The specimen is extracted through a Pfannenstiel incision (4-6cm) or enlarged port site protected by a wound protector. A circular stapler is introduced transanally and connected to the anvil. The anastomosis is created at the upper rectum under direct laparoscopic visualization. Integrity is tested with air insufflation while the anastomosis is submerged under saline solution [14].

Laparoscopic Subtotal Colectomy with Cecorectal Anastomosis (SC-CRA)
Subtotal colectomy with antiperistaltic cecorectal anastomosis preserves the cecum and ileocecal valve, potentially reducing postoperative diarrhea while maintaining the absorptive function of the proximal colon [12].

Technical Considerations: The procedure preserves the cecum with 5-10cm of ascending colon. The preserved cecal segment is rotated 180 degrees to create an antiperistaltic anastomosis with the rectum. This orientation theoretically slows transit through the remaining bowel, reducing diarrhea. The ileocecal valve remains intact, potentially preventing bacterial reflux and maintaining the colonic microbiome.

Vascular Preservation: The ileocolic vessels are preserved to maintain cecal blood supply. The right colic and middle colic vessels are divided. Care must be taken to ensure adequate cecal perfusion before creating the anastomosis. Intraoperative assessment using indocyanine green fluorescence angiography can be helpful in borderline cases.
A multicenter randomized trial (STOPS trial) is currently comparing TC-IRA versus SC-CRA outcomes with primary endpoint of Wexner Constipation Score

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at 12 months [15]. Preliminary comparative studies have shown no significant difference in functional outcomes between the techniques at 24-month follow-up, though SC-CRA may have advantages in reducing postoperative diarrhea.

Single-Incision Laparoscopic Surgery (SILS)

Single-incision laparoscopic surgery represents further refinement of minimally invasive techniques, offering improved cosmesis and potentially reduced postoperative pain [16].

Technical Aspects: A 2-3cm transumbilical incision is made and a specialized SILS port is inserted. Articulating instruments and a flexible-tip laparoscope are used to overcome the technical challenges of parallel instrument positioning. The procedure follows similar steps to conventional laparoscopic colectomy but requires specialized training and equipment.

Outcomes: Case reports of SILS total colectomy for intestinal neuronal dysplasia demonstrated feasibility with comparable outcomes to multiport approaches [16]. Benefits include reduced abdominal trauma, decreased postoperative pain, minimized trocar-related complications including hernias, and superior cosmesis—particularly valuable in the typically young patient population affected by this condition.

Limitations: SILS requires specialized equipment and advanced laparoscopic skills. The learning curve is steep, and operative times may be longer during the initial experience. Patient selection should favor those with favorable body habitus and absence of extensive prior surgery.

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Robotic-Assisted Surgery

Robotic-assisted colectomy represents the newest advancement in minimally invasive colorectal surgery, offering potential technical advantages over conventional laparoscopy [17].

Technical Advantages: The da Vinci surgical system provides three-dimensional high-definition visualization, 7 degrees of freedom in instrument movement, tremor filtration, and motion scaling. These features facilitate precise dissection in confined spaces and complex suturing. The stable camera platform eliminates the variability of human-held laparoscopes.

Port Placement and Docking: Standard robotic port placement includes a camera port and 3-4 robotic arm ports arranged in an arc. For total colectomy, repositioning or multiple docking may be required to address all quadrants. Newer single-docking approaches using the da Vinci Xi system allow completion without redocking [18].

Evidence: A systematic review of robotic versus laparoscopic colorectal surgery demonstrated faster return of bowel function (3±1 vs 4±1.2 days), lower anastomotic leak rates, and reduced conversion rates with robotic approaches [17]. A 2023 propensity-matched analysis of 53,209 colectomies found robotic surgery associated with higher textbook outcome rates (71% vs 64% for right colectomy, 75% vs 68% for left colectomy) compared to laparoscopy [19]. However, longer operative times (266±41 vs 223±51 minutes) and substantially higher costs remain significant limitations.

Laparoscopic Segmental Resection

For patients with isolated dolichosigmoid without pancolonic dysfunction, laparoscopic sigmoid resection may be appropriate when transit delay is localized to the sigmoid segment [5].

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Patient Selection: Segmental colonic transit time studies using radio-opaque markers can identify patients with predominantly left-sided transit delay who may benefit from limited resection. Marker retention primarily in the sigmoid colon with normal proximal transit supports consideration of segmental resection [20].

Surgical Technique: The procedure involves mobilization and resection of the redundant sigmoid colon (typically 50-70cm) with primary colorectal anastomosis. The inferior mesenteric artery is divided, and the descending colon is mobilized to ensure a tension-free anastomosis. The anastomosis should be placed at the level of the sacral promontory with the distal resection margin in the upper rectum where taeniae coli are present.

Outcomes: A case series demonstrated significant improvement in chronic constipation following laparoscopic resection of redundant sigmoid colon, with patients discharged on postoperative days 3-4 [5]. However, segmental resection carries a higher risk of recurrent constipation (17-29%) if residual dysfunctional colon remains, and long-term follow-up data suggest total colectomy may provide more durable results [20].

Hand-Assisted Laparoscopic Surgery (HALS)

Hand-assisted laparoscopic surgery offers a hybrid approach combining the benefits of minimally invasive surgery with the tactile feedback and retraction capabilities of open surgery [4].

Technique: A hand-port device is placed through a 7-8cm incision (typically Pfannenstiel or midline) allowing introduction of the surgeon's non-dominant hand. The hand provides retraction, blunt dissection, and tactile feedback while visualization and fine dissection are performed laparoscopically. This approach

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may reduce operative time and conversion rates, particularly during the learning curve or in complex cases.

Indications: HALS may be particularly useful in patients with massively dilated colon, extensive adhesions from prior surgery, or when the surgeon is early in the learning curve for total laparoscopic colectomy. The hand-port incision serves as the extraction site, potentially reducing overall incisional burden.

Intraoperative Considerations

Ureteral Protection: Lighted ureteral stents are recommended by many surgeons to facilitate identification during lateral mobilization, particularly in patients with extensive sigmoid redundancy or prior pelvic surgery. Identification and preservation of the ureters bilaterally is essential [21].

Energy Devices: Modern energy devices including ultrasonic scalpels (Harmonic) and advanced bipolar vessel-sealing systems (LigaSure, EnSeal) allow efficient mesenteric division while minimizing thermal spread. The choice of energy device depends on surgeon preference and tissue characteristics.

Anastomotic Technique: Both circular stapled and hand-sewn anastomoses are acceptable. Stapled anastomosis is most common, using 28-31mm circular staplers. The anastomosis should be tested for integrity and hemostasis. Some surgeons routinely perform protective ileostomy, though this is not standard practice for ileorectal anastomosis [22].

Enhanced Recovery Protocols: Implementation of Enhanced Recovery After Surgery (ERAS) protocols has been shown to improve outcomes in colorectal surgery. Key elements include limited bowel preparation, goal-directed fluid

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therapy, multimodal analgesia with opioid sparing, early feeding, and early mobilization [22].

SURGICAL OUTCOMES: COMPARATIVE ASSESSMENT

Short-Term Perioperative Outcomes

Multiple studies have demonstrated favorable perioperative outcomes for minimally invasive colectomy. The ASCRS/SAGES clinical practice guidelines confirm that laparoscopic approaches are associated with decreased time to pulmonary recovery, reduced narcotic use, and improved short-term quality of life [22].

Table 1. Comparison of Perioperative Outcomes by Surgical Approach

Parameter	Laparoscopic	Robotic	Open	p-value
Operative time (min)	180-240	220-280	150-200	<0.05
Blood loss (mL)	100-200	80-150	200-400	<0.01
Hospital stay (days)	4-8	4-7	7-15	<0.001
Return of bowel function (days)	3-4	2-3	4-6	<0.01
Conversion rate (%)	8-15	3-8	N/A	<0.05
Wound infection (%)	2-4	1-3	5-10	<0.01

Data compiled from references [3, 17, 19, 22]

Comparative Assessment: Laparoscopic vs Open Surgery

Cochrane systematic reviews have consistently demonstrated advantages of laparoscopic over open colorectal surgery. The COLOR trial and ALCCaS trial showed laparoscopy superior for short-term outcomes including return of bowel function, blood loss, postoperative pain, and hospital length of stay [22]. A meta-analysis of 19 comparative studies involving 2,383 patients found laparoscopic sigmoid resection associated with:

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• Fewer wound infections (RR 0.54, 95% CI 0.36-0.80, p<0.01)
• Lower transfusion rates (RR 0.25, 95% CI 0.10-0.60, p<0.01)
• Reduced ileus rates (RR 0.37, 95% CI 0.20-0.66, p=0.001) [22,23,24]

Comparative Assessment: Robotic vs Laparoscopic Surgery

The comparison between robotic and laparoscopic approaches reveals important trade-offs. The 2023 ACS-NSQIP analysis of 53,209 colectomies demonstrated that robotic surgery achieved higher "textbook outcome" rates, defined as absence of 30-day complications, readmission, mortality, and length of stay <5 days [19]:

Table 2. Textbook Outcomes: Robotic vs Laparoscopic Colectomy

Procedure	Robotic (%)	Laparoscopic (%)	p-value
Right colectomy	71	64	<0.001
Left colectomy	75	68	<0.001
Low anterior resection	52	56	0.012

Adapted from World J Surg Oncol. 2023 [19]

However, robotic surgery is associated with significantly longer operative times and higher costs. The learning curve for robotic colorectal surgery is estimated at 20-40 cases for proficiency [18]. Cost analysis must consider equipment acquisition, maintenance, consumables, and extended operative time.

Comparative Assessment: TC-IRA vs SC-CRA

The comparison between total colectomy with ileorectal anastomosis and subtotal colectomy with cecorectal anastomosis is a subject of ongoing investigation. A comparative study of 103 patients found [12]:

• Surgery successful in 100% of patients in both groups
• Anti-laxative use higher in TC-IRA (39.6% vs 20.0%, p=0.03)
• Abdominal pain/distension similar (33.9% vs 32.0%, p>0.05)

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• No significant difference in Wexner scores at 24 months
• Quality of life indices (GIQLI) comparable between groups

Long-Term Functional Results

A comprehensive systematic review of 40 studies (2,045 patients) identified widespread variability in patient satisfaction rates (39-100%) after colectomy for STC, reflecting differences in patient selection, surgical technique, and outcome assessment [3]. Factors associated with improved outcomes include:

• Documented slow-transit on preoperative testing
• Absence of concomitant evacuation disorder
• Absence of chronic abdominal pain
• No history of sexual abuse [11]

A prospective study of defecation function and quality of life demonstrated significant improvement following total/subtotal colectomy, with 90% of patients reporting benefit at 1-year follow-up. The gastrointestinal quality of life index (GIQLI) scores increased significantly, and SF-36 results showed improvements in six of eight domains [24].

Table 3. Long-Term Functional Outcomes After Colectomy for STC

Outcome Measure	Result	Range/95% CI
Patient satisfaction	71-90%	39-100%
Bowel frequency (movements/day)	2-4	1.3-5.0
Persistent diarrhea	14%	0-46%
Recurrent constipation	8%	5-29%
Need for permanent ileostomy	5%	2-10%

Data compiled from references [3, 11, 24, 25]

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Quality of Life Assessment

A systematic review of quality of life after laparoscopic versus open colorectal surgery found no clinically relevant difference in long-term quality of life (measured 1 week to 6.7 years postoperatively), though laparoscopic approaches showed trends toward early improvement [26]. Importantly, successful relief of constipation may not translate directly to improved overall quality of life, as abdominal pain and other gastrointestinal symptoms may persist [27].

COMPLICATIONS

The CapaCiTY systematic review documented an overall complication rate of approximately 24% following colectomy for chronic constipation [3]. Understanding complication profiles is essential for informed consent and postoperative management.

Early Complications

- Anastomotic leak: 2-4%
- Wound infection: 2-6%
- Postoperative ileus: 10-15%
- Intraoperative bleeding requiring transfusion: 1-3%
- Mortality: 0-0.4%

Late Complications

Small Bowel Obstruction: Recurrent small bowel obstruction affects approximately 15% (95% CI: 10-21%) of patients in long-term follow-up, with significant burden of re-hospitalization and frequent need for surgical management. This remains one of the most concerning long-term complications and may be less frequent with laparoscopic approaches due to reduced adhesion formation [3].

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Persistent Diarrhea: Reported in 14-46% of patients (median 14%), diarrhea is a common consequence of total colectomy that may require long-term antidiarrheal medication. This is generally better tolerated than preoperative constipation and tends to improve over the first postoperative year.

Recurrent Constipation: Approximately 5-10% of patients experience recurrent constipation requiring further intervention, including 5% who ultimately require permanent ileostomy.

Incisional Hernia: Postoperative ventral hernia affects 10-25% of patients following colectomy. Risk factors include midline extraction sites, chronic cough, obesity, and constipation. Use of paramedian extraction sites may reduce this risk [28].

DISCUSSION

The surgical management of chronic coprostasis in patients with dolichomegacolon has evolved significantly with the adoption of minimally invasive techniques. The evidence supports laparoscopic total colectomy with ileorectal anastomosis as the procedure of choice for carefully selected patients with confirmed slow-transit constipation refractory to all conservative measures. The critical importance of patient selection cannot be overemphasized. As demonstrated by Grossi et al., rigorous application of selection criteria results in only 1.7% of constipated patients being appropriate surgical candidates [9]. The high prevalence of factors associated with poor outcomes—including fecal incontinence (24.6%), abdominal pain (13.8%), and evacuation disorders (28.4%)—underscores the need for comprehensive preoperative evaluation.

It is important to note that dolichocolon per se is never an indication for surgery; surgical intervention is indicated only when documented transit delay is present and all conservative options have been exhausted [29]. The decision to proceed

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with colectomy should involve multidisciplinary discussion including gastroenterologists, colorectal surgeons, and when appropriate, mental health professionals.

The comparative data presented in this review demonstrate clear advantages of minimally invasive approaches over open surgery in terms of perioperative outcomes. Robotic surgery offers incremental benefits over conventional laparoscopy including lower conversion rates and faster return of bowel function, but at the cost of longer operative times and substantially higher costs. The choice between robotic and laparoscopic approaches should consider institutional resources, surgeon experience, and patient factors.

The ongoing STOPS trial comparing TC-IRA versus SC-CRA will provide valuable evidence to guide technique selection [15]. Until these results are available, both techniques remain acceptable options based on surgeon preference and patient factors such as concern for postoperative diarrhea.

Limitations of the current evidence include predominance of observational studies, small cohort sizes, heterogeneous outcome measures, and limited long-term follow-up. The variability in patient satisfaction rates (39-100%) across studies highlights the importance of standardized outcome measures and careful patient selection.

CONCLUSIONS

Minimally invasive surgical treatment for chronic coprostasis in patients with dolichomegacolon offers favorable outcomes in appropriately selected patients. The following conclusions can be drawn from the current evidence:

- Laparoscopic total colectomy with ileorectal anastomosis is a safe and effective procedure with 71-90% patient satisfaction rates and superior perioperative outcomes compared to open surgery.

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- Careful patient selection using objective transit studies and exclusion of defecatory disorders is essential for optimal outcomes. Only approximately 1.7% of constipated patients meet strict selection criteria.
- Robotic-assisted surgery demonstrates improved textbook outcome rates (71-75% vs 64-68%) compared to laparoscopy but with longer operative times and higher costs.
- Small bowel obstruction (15%) and persistent diarrhea (14%) are the most common long-term complications requiring patient counseling.
- Subtotal colectomy with cecorectal anastomosis may offer advantages in reducing postoperative diarrhea with comparable functional outcomes to total colectomy.
- Multidisciplinary evaluation and realistic patient counseling regarding expected outcomes and complications are critical for success.

Future research should focus on comparative trials of different surgical techniques, identification of predictors for successful outcomes, and long-term quality of life assessment using validated instruments.

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