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Approach to the Diagnostic Workup and Management of Small Bowel Lesions at a Tertiary Care Center (poster)

David Stein

University of Massachusetts Medical School

Jonathan Green


University of Massachusetts Medical School

Christopher R. Schlieve

University of Massachusetts Medical School

See next page for additional authors

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David Stein, Jonathan Green, Christopher R. Schlieve, Ann K. Friedrich, Kevin P. Baratta, David H. Ma, May Min, Krunal Patel, David R. Cave, Demetrius E. M. Litwin, and Mitchell A. Cahan

Keywords

Small bowel, Minimally-invasive surgery, Gastrointestinal bleed

Comments

David Stein participated in this study as a medical student as part of the Senior Scholars research program at the University of Massachusetts Medical School. His work was presented on Senior Scholars Program Poster Presentation Day at the University of Massachusetts Medical School, Worcester, MA, on May 2, 2018.

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Approach to the Diagnostic Workup and Management of Small Bowel Lesions at a Tertiary Care Center

Stein D¹, Green J¹, Schlieve CR¹, Friedrich AK², Baratta K², Ma DH¹, Min M¹, Patel K¹, Cave DR¹, Litwin DE¹, Cahan MA¹

¹University of Massachusetts Medical School, 55 Lake Avenue North, Worcester MA 01655

² Saint Mary's Hospital, 56 Franklin Street, Waterbury, Connecticut, 06706

Background and Purpose

- Primary small bowel lesions (SBLs) are difficult to diagnose with modern endoscopic and radiographic techniques.
- SBLs are rare, yet vary widely in pathology and gastrointestinal tract location.
- It is important to review prior SBL cases to understand what factors were most beneficial in directing diagnostic approaches and subsequent treatments for these patients.
- Here, we evaluate diagnostic modalities and management practices of patients with SBLs at an advanced endoscopic referral center.

Methods

- We analyzed patients undergoing surgical management for SBL from 2005-2015 at a single tertiary care center.
- Patients were stratified into two major presenting symptoms and signs: Gastrointestinal bleed/anemia (**GIBA**) or obstruction/pain (**OP**).

Results Summary

- 112 patients underwent surgery after presenting with GIBA (n=67) or OP (n=45).
- Mean age was 61.8 years and 45% were women.
- Patients with GIBA had a higher body mass index, were more likely to have chronic or acute-on-chronic symptoms (100% vs. 67%), and more often referred from outside hospitals (82% vs. 44%) (p<0.01).
- Most common preoperative imaging modalities were video capsule endoscopy (VCE) (96%) for GIBA and computer tomography CT (78%) for OP.
- VCE and CT findings were frequently concordant with operative findings in GIBA (67%) and OP (54%) patients, respectively.
- Intraoperative visual inspection or palpation of the bowel identified lesions in 71% of patients.
- Intraoperative Enteroscopy confirmed or identified lesions in 69% of GIBA patients (n=26)
- 90% of GIBA patients had a small bowel resection (93% laparoscopic)
- 58% of OP patients had a small bowel resection (81% laparoscopic)
- Surgical exploration failed to identify lesions in 10% of GIBA patients and 24% of OP patients.
- 20% of GIBA patients (vs. 13% of OP patients) who underwent resections had recurrent symptoms

Table 1

	Bleed/Anemia (n=67)	Obstruction/Pain (n=45)	p value
Age (mean, years)	62.1 (15)	61.3 (19)	0.81
Male	41 (61)	21 (47)	0.13
Race			0.46
Caucasian	51 (76)	35 (78)	
Insurance			0.47
Public	34 (51)	23 (51)	
Co-morbidities			
Body Mass Index	30 (+/-8.1)	24.9 (+/-4.0)	<0.01
Diabetes	12 (18)	8 (18)	0.99
Hyperlipidemia	23 (34)	14 (31)	0.68
Hypertension	34 (51)	20 (44)	0.51
Presentation			<0.01
Acute	0	15 (33)	<0.01
Chronic	45 (67)	22 (49)	0.05
Acute on Chronic	22 (33)	8 (18)	0.08
Symptoms			
GI Bleed	45 (67)	0 (0)	
Anemia	22 (33)	0 (0)	
Obstruction	0 (0)	11 (24)	
Pain	0 (0)	34 (76)	

Values are N (%) or mean (standard deviation) unless otherwise specified

Table 1: Patient characteristics according to clinical presentation

Figure 1

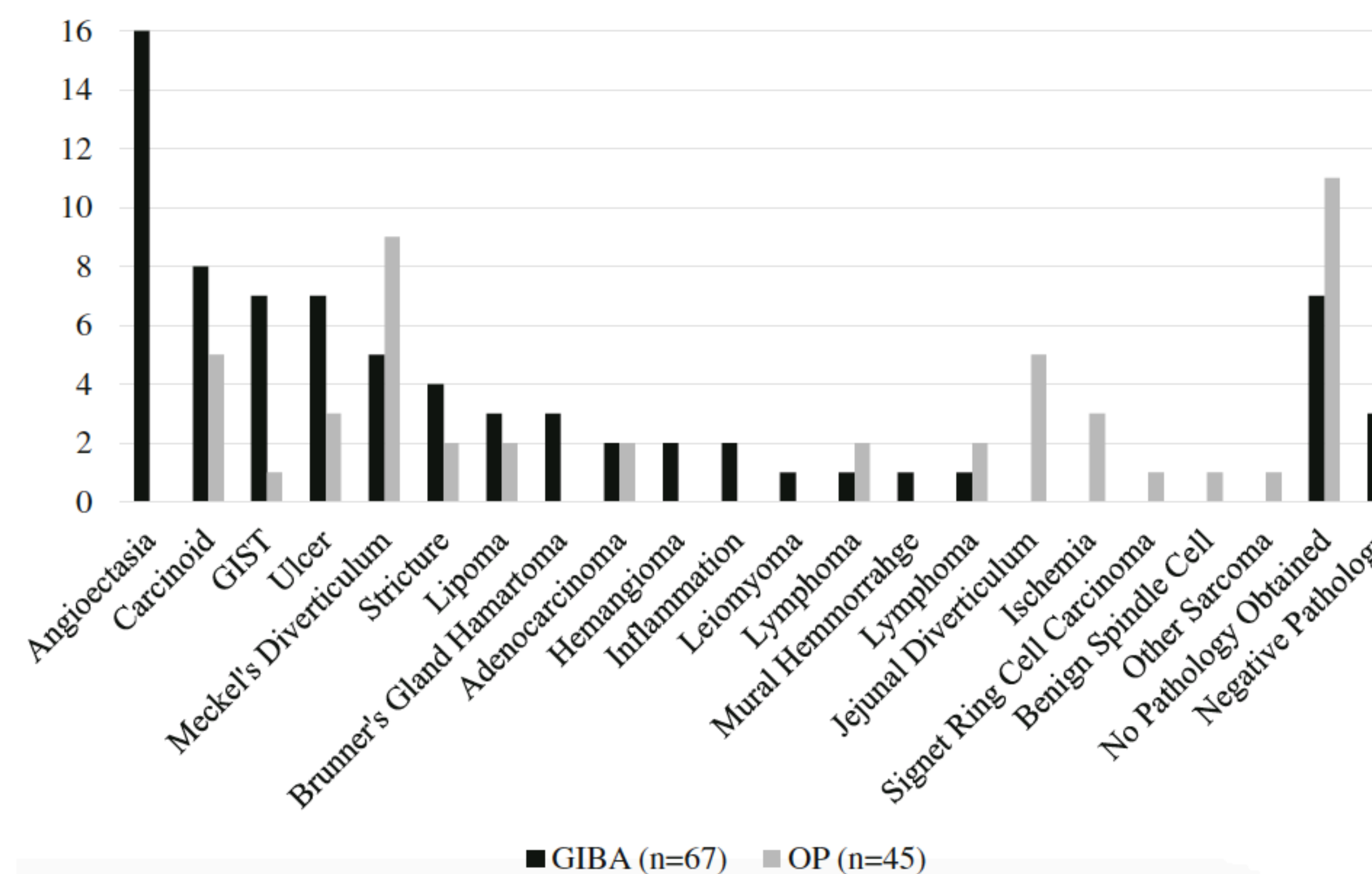


Figure 1: A graphical representation of pathology based on clinical presentation. Gastrointestinal bleed and anemia (GIBA) area represented in black. Obstruction and pain are represented in gray. Values are not mutually exclusive.

Conclusions

- Management and identification of SBL is governed by presenting symptomatology.
- Optimal management includes VCE and IE for GIBA and CT scans for OP patients.
- Comprehensive evaluation may require referral to specialized centers

Acknowledgements

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Table 2

Endoscopy	Endoscopy and Imaging Frequency			Positive Finding ^a		
	Bleed/Anemia	Obstruction/Pain	p value	Bleed/Anemia	Obstruction/Pain	p value
Capsule	64 (96)	18 (40)	<0.01	43 (67)	7 (39)	<0.01
Colonoscopy	58 (87)	19 (42)	<0.01	3 (5.2)	1 (5.3)	0.65
EGD	58 (87)	14 (31)	<0.01	0 (0)	0 (0)	1.00
Deep Enteroscopy	49 (73)	9 (20)	<0.01	21 (43)	2 (22)	0.01
Radiology						
CT	18 (27)	35 (78)	<0.01	5 (28)	19 (54)	<0.01
CTE	21 (31)	11 (24)	0.52	10 (48)	3 (27)	0.24
X Ray	4 (6.0)	10 (22)	0.02	0 (0)	0 (0)	1.00
Tagged RBC Scan	8 (12)	0 (0)	<0.01	1 (13)	0 (0)	1.00
Angiography	7 (11)	0 (0)	0.04	3 (27)	0 (0)	0.27
MRE	2 (3.0)	3 (6.7)	0.39	1 (50)	1 (33)	1.00
None	29 (43)	1 (2.2)	<0.01	-	-	-

Values are N (%) or mean (standard deviation) unless otherwise specified

Values are not mutually exclusive

^aPositive finding that correlated to operative findings

Table 2: Endoscopy and imaging findings according to clinical presentation

Figure 2

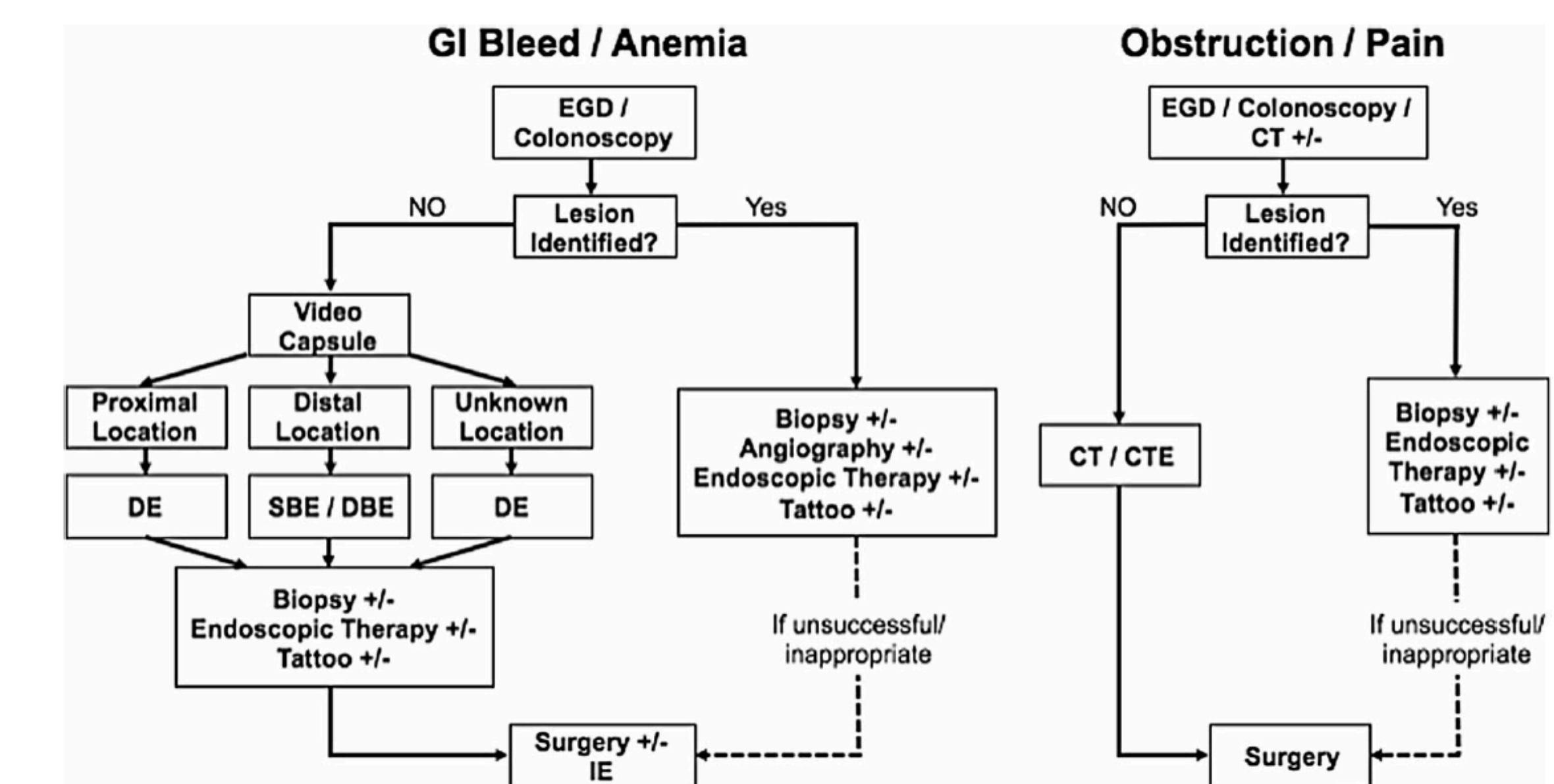


Figure 2: Approach to the management of suspected small bowel lesions: workup and treatment should be determined by presenting symptoms of either gastrointestinal bleeding/anemia (GIBA) or obstruction/pain (OP). Deep enteroscopy (DE) includes spiral enteroscopy, single-balloon enteroscopy (SBE), and double-balloon enteroscopy (DBE). Computed tomography (CT), computed tomography enterography (CTE), intraoperative enteroscopy (IE)