American College of Radiology
ACR Appropriateness Criteria®

Radiologic Management of Mesenteric Ischemia

Variant 1: Patient with recent onset abdominal pain, no peritoneal signs, known atrial fibrillation. CTA shows filling defect in proximal SMA consistent with embolus.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Systemic anticoagulation	Usually appropriate		N/A	N/A	8	n/a	0	0	0	0	0	0	0	0	0
Surgical embolectomy	May be appropriate		N/A	N/A	5	n/a	0	0	0	0	0	0	0	0	0
Transcatheter thrombolysis	Usually appropriate		N/A	N/A	7	n/a	0	0	0	0	0	0	0	0	0
Angiography and aspiration embolectomy	Usually appropriate		N/A	N/A	7	n/a	0	0	0	0	0	0	0	0	0

Variant 2: Patient with recent onset abdominal pain, no peritoneal signs, known atrial fibrillation. CTA shows calcified atherosclerotic plaque involving the aorta and its major branches, as well as proximal short-segment occlusion of the proximal SMA.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Systemic anticoagulation	Usually appropriate		N/A	N/A	8	n/a	0	0	0	0	0	0	0	0	0
Surgical endarterectomy or bypass	May be appropriate		N/A	N/A	6	n/a	0	0	0	0	0	0	0	0	0

Angiography and transcatheter thrombolysis followed by percutaneous transluminal angioplasty and stent placement	Usually appropriate		N/A	N/A	8	n/a	0	0	0	0	0	0	0	0	0

Variant 3: Hospitalized patient with cardiac disease causing low cardiac output who developed abdominal pain but without peritoneal signs. CT angiogram shows patent origins and proximal portions of celiac artery, SMA, and IMA, with diffuse irregular narrowing of SMA branches.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Angiography with infusion of vasodilator	Usually appropriate		N/A	N/A	8	n/a	0	0	0	0	0	0	0	0	0
Systemic infusion of prostaglandin E1	Usually appropriate		N/A	N/A	7	n/a	0	0	0	0	0	0	0	0	0
Systemic anticoagulation	Usually appropriate		N/A	N/A	7	n/a	0	0	0	0	0	0	0	0	0

Variant 4: Patient with history of abdominal pain after meals for the past few months and weight loss. CTA shows aortic atherosclerotic disease and suggests SMA-origin stenosis with occlusion of celiac origin and an occluded IMA.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Angiography with possible percutaneous transluminal angioplasty and stent placement	Usually appropriate		N/A	N/A	8	n/a	0	0	0	0	0	0	0	0	0
Surgical bypass or endarterectomy	Usually appropriate		N/A	N/A	7	n/a	0	0	0	0	0	0	0	0	0
Systemic anticoagulation	May be appropriate		N/A	N/A	5	n/a	0	0	0	0	0	0	0	0	0

Variant 5: Patient with pain after meals and CTA showing widely patent origins of SMA and IMA, with possible compression of the celiac origin by the median arcuate ligament.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Mesenteric angiography in lateral projection during both inspiration and expiration	Usually appropriate		N/A	N/A	7	n/a	0	0	0	0	0	0	0	0	0
Surgery with median arcuate ligament release, with or without bypass	Usually appropriate		N/A	N/A	8	n/a	0	0	0	0	0	0	0	0	0
Supportive measures only (analgesics)	Usually appropriate		N/A	N/A	7	n/a	0	0	0	0	0	0	0	0	0
Systemic anticoagulation	Usually not appropriate		N/A	N/A	2	n/a	0	0	0	0	0	0	0	0	0
Percutaneous transluminal angioplasty with stent placement	May be appropriate		N/A	N/A	4	n/a	0	0	0	0	0	0	0	0	0

Variant 6: Previously healthy patient with worsening diffuse abdominal pain for 2 weeks. CTA shows occlusion of the superior mesenteric vein and its major tributaries. Small bowel appears normal.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Systemic anticoagulation	Usually appropriate		N/A	N/A	9	n/a	0	0	0	0	0	0	0	0	0
Transhepatic superior mesenteric vein catheterization and thrombolytic infusion	Usually appropriate		N/A	N/A	7	n/a	0	0	0	0	0	0	0	0	0
SMA angiography followed by thrombolytic infusion	May be appropriate		N/A	N/A	4	n/a	0	0	0	0	0	0	0	0	0

Surgical thrombectomy	Usually not appropriate		N/A	N/A	3	n/a	0	0	0	0	0	0	0	0	0

Appendix Key

A more complete discussion of the items presented below can be found by accessing the supporting documents at the designated hyperlinks.

Appropriateness Category: The panel's recommendation for a procedure based on the assessment of the risks and benefits of performing the procedure for the specified clinical scenario.

SOE: Strength of Evidence. The assessment of the amount and quality of evidence found in the peer reviewed medical literature for an appropriateness recommendation.

- **References:** The citation number and PMID for the reference(s) associated with the recommendation.
- **Study Quality**: The assessment of the quality of an individual reference based on the number of study quality elements described in the reference.

RRL: Relative Radiation Level. A population based assessment of the amount of radiation a typical patient may be exposed to during the specified procedure.

Rating: The final rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

Median: The median rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

Final tabulations: A histogram showing the number of panel members who rated the procedure as noted in the column heading (ie, 1, 2, 3, etc.).

Additional supporting documents about the AC methodology and processes can be found at **www.acr.org/ac.**