

A worldwide survey to assess the management of patients with mesenteric ischaemia & infarction

ESPEN Acute Intestinal Failure SIG



We are conducting a survey to assess the different approaches to the management of patients with mesenteric ischaemia and intestinal infarction. Patients with mesenteric ischaemia often have a significant delay until a diagnosis is made and some then present with a mesenteric infarction. There may be differences in the availability of appropriate investigations and treatments as well as differences in teaching and awareness in different settings. We wish to assess the importance of some of these factors prior to conducting a more formal observational study. We value your input to this survey.

Intestinal ischaemia & intestinal infarction

Ischaemia refers to intestinal injury related to impaired or disrupted perfusion that can potentially be reversed. This mesenteric vascular insufficiency may be occlusive or non-occlusive in origin.

Infarction refers to irreversible transmural necrosis of the intestine due to ischaemia.

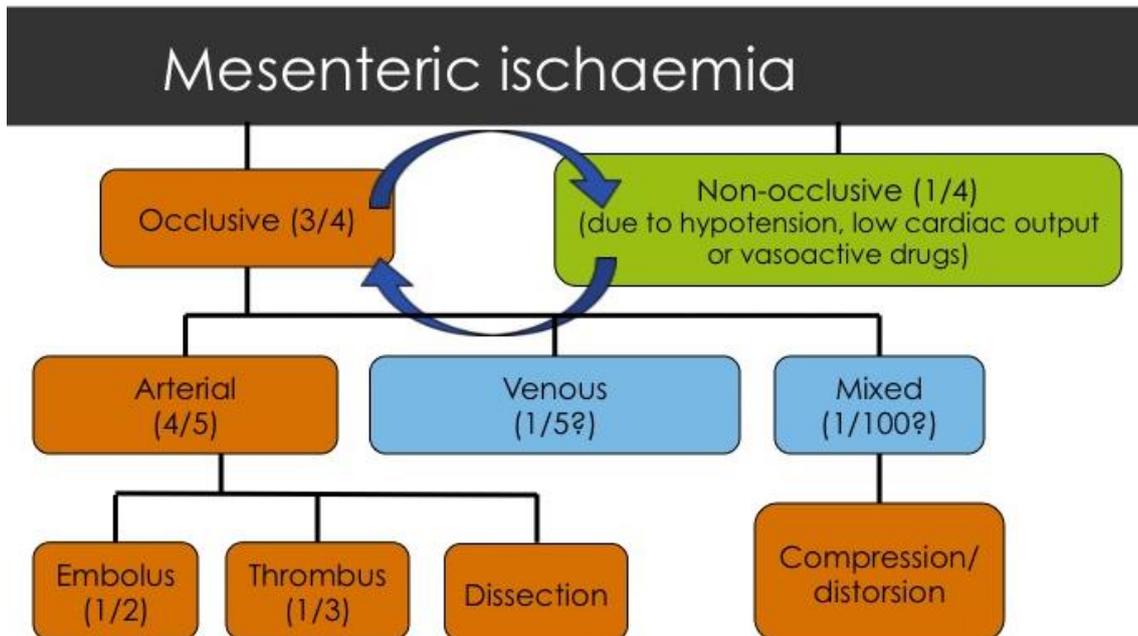
Please consider the following definitions:

Occlusive intestinal ischaemia

Decreased mesenteric blood flow due to high-grade stenosis or occlusion of mesenteric vessels (arterial or venous)

Non-occlusive intestinal ischaemia

Decreased mesenteric blood flow without high-grade stenosis or occlusion of specifically identifiable (larger) mesenteric vessels. The mechanisms include severe vasoconstriction (especially if accompanied by hypovolaemia), very low cardiac output and compression of mesenteric vessels due to increased intra-abdominal pressure.

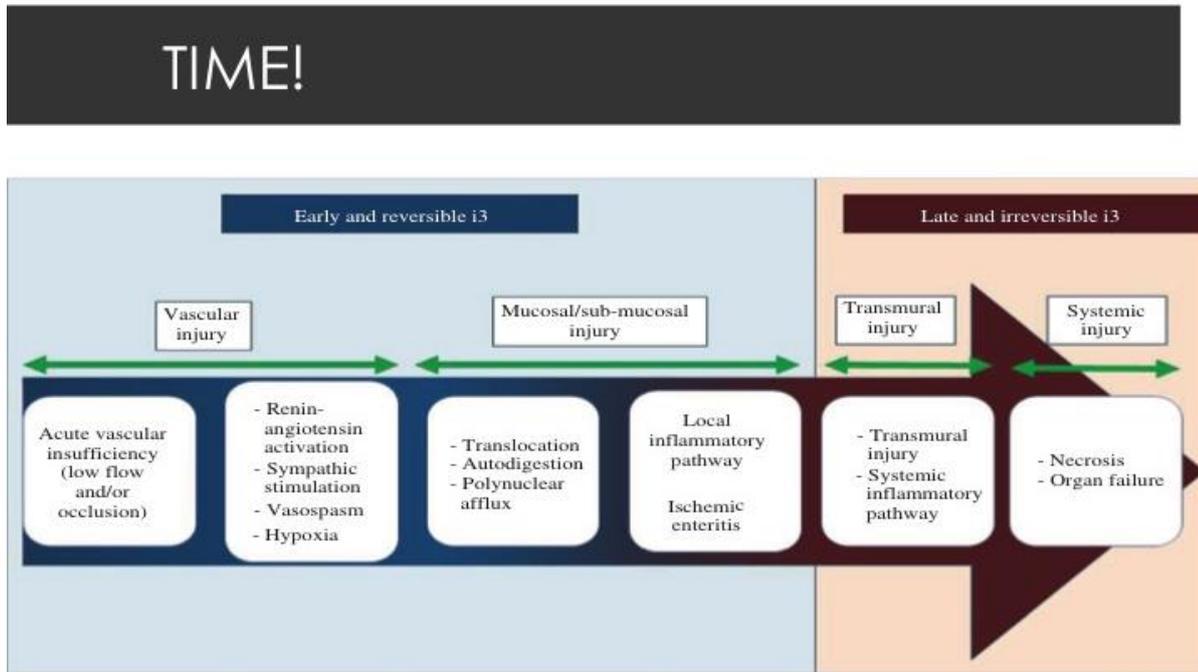


□ I³ = ischemic intestinal injury, modified after O. Corcos

Corcos O, Nuzzo A. Best Pract Res Clin Gastroenterol. 2013;27(5):709-25. doi: 10.1016/j.bpg.2013.08.006.
Corcos O et al. Corcos O et al. Transplantation 2017; 101 (6S2) - p S10; doi: 10.1097/01.tp.0000521287.58437.75
Kammerer S et al. PloS one 2018; vol. 13,3 e0193698. doi:10.1371/journal.pone.0193698

Intestinal infarction

Intestinal ischaemia leading to irreversible transmural necrosis of part of the gastrointestinal tract with or without an irreversible loss of blood flow.



Peoc'h K et al. Clin Chem Lab Med 2018; 56(3): 373–385

Questionnaire

About your centre / hospital

1	Do you care for patients with acute mesenteric ischaemia or non-occlusive mesenteric ischaemia	Yes / No
1a	If no: Do you refer to another hospital?	Yes / No
	a) Do you accept referrals from other hospitals?	Yes / No
	b) Where do you generally manage these patients? (multiple options possible)	medical ward surgical ward combined medical and surgical ward HDU ICU
	c) Has your institution created a dedicated unit for the management of intestinal vascular emergencies or acute intestinal failure?	Yes / No
2	What population do you receive patients from? (multiple options possible)	Local Regional National
3	Do you have a multidisciplinary nutrition support team?	Yes / No
3a	If yes: Please indicate which disciplines form part of the core nutrition team (multiple options possible)	Surgeons Physicians Nurses Dietitians Pharmacists Others (specify)

Patients with acute abdominal pain attending your emergency services

4	For patients presenting with acute abdominal pain, how often do you feel that the diagnosis of mesenteric ischaemia is delayed?	Never / rarely / often / always / unable to comment
5	For patients presenting with acute abdominal pain, how often do you feel that the diagnosis of mesenteric ischaemia is missed?	Never / rarely / often / always / unable to comment
6	In your practice, what are the most useful elements leading to the diagnosis of early mesenteric <u>ischaemia</u> (without infarction)? (multiple options possible, select a maximum of 5)	History of postprandial abdominal pain History of unintentional weight loss Decreased dietary intake Presence of cardiovascular risk factors Abdominal pain with tenderness Raised inflammatory markers (CRP/ESR) Presence of acidosis Raised serum lactate Other abnormal blood tests CT abdomen & pelvis without IV contrast CT abdomen & pelvis with IV contrast Diagnostic laparoscopy/laparotomy
7	In your practice, what are the most useful elements to make the correct diagnosis of mesenteric <u>infarction</u>? (multiple options possible, select a maximum of 5)	History of postprandial abdominal pain History of unintentional weight loss Decreased dietary intake Presence of cardiovascular risk factors Sudden onset abdominal pain with tenderness requiring opiates Raised inflammatory markers (CRP/ESR) Presence of acidosis Raised serum lactate Other abnormal blood tests

		CT abdomen & pelvis without IV contrast CT abdomen & pelvis with IV contrast Diagnostic laparoscopy/laparotomy Organ failure
8	In your practice, do patients presenting with acute abdominal pain due to mesenteric <u>ischaemia</u> undergo urgent or emergency revascularisation procedures?	Never / rarely / sometimes / often / always / unable to comment
9	In your practice, do patients presenting with acute abdominal pain due to mesenteric <u>infarction</u> undergo urgent or emergency revascularisation procedures?	Never / rarely / sometimes / often / always / unable to comment

Management of mesenteric ischaemia

10	In the management of a patient with established mesenteric <u>ischaemia</u> (symptoms with appropriate degree of mesenteric stenosis), what treatment options will be considered in your hospital (multiple options possible)	Medical treatments (antiplatelet agents, heparin) Endovascular therapy (angioplasty, stenting, thrombectomy, thrombolysis) Surgical vascularisation (ROMS, bypass, thrombectomy) Diagnostic laparoscopy Unable to comment
10b	If angioplasty and/or vascular bypass surgery is not performed at your hospital, would this type of patient be referred elsewhere?	Yes / no

Management of non-occlusive mesenteric ischaemia

11	Do you manage patients on ICU (level 3 care) who could have <u>non-occlusive mesenteric ischaemia</u>?	Yes / no
12	In your practice, what are the most helpful ways of diagnosing <u>non-occlusive mesenteric ischaemia</u> in patients on intensive care? (multiple options possible, select a maximum of 3)	Unexplained uncontrolled shock Unexplained raised lactate in patients on inotropic support Increased intraabdominal pressure Endoscopy Abdominal CT with contrast Laparoscopy Unable to comment Other (free text)

Management of mesenteric infarction

13	In the management of a patient with established mesenteric <u>infarction</u>, what treatment options would be considered in your hospital (multiple options possible)	Medical treatments (antiplatelet agents, heparin) Endovascular therapy (angioplasty, stenting, thrombectomy, thrombolysis) Surgical vascularisation (ROMS, bypass, thrombectomy) Diagnostic laparoscopy Large intestinal resection if extended necrosis Unable to comment
13a	If medical treatments only offered, would you refer to another centre?	yes/ no
14	In the management of an <u>80 year old</u> patient* with an extensive mesenteric infarction (all of the small bowel from 20cm after the DJ flexure to the mid transverse colon), what treatment options would be considered in your hospital *no severe comorbidities affecting lifespan	Conservative / palliative approach (no resection) Small bowel & colon resection with primary anastomosis Small bowel & colon resection with jejunostomy Small bowel & colon resection with jejunostomy & colonic mucus fistula SB & colon resection and closure of the

		remnant segments inside the abdomen with planned second look at 48h
15	In the management of a 45 year old patient* with an extensive mesenteric infarction (all of the small bowel from 20cm after the DJ flexure to the mid transverse colon), what treatment options would be considered in your hospital *no severe comorbidities affecting lifespan	Conservative / palliative approach (no resection) Small bowel & colon resection with primary anastomosis Small bowel & colon resection with jejunostomy Small bowel & colon resection with jejunostomy & colonic mucus fistula SB & colon resection and closure of the remnant segments inside the abdomen with planned second look at 48h

Postoperative management of patients after a mesenteric infarction

16	After the surgical management of mesenteric infarction (resection ± revascularization) do you plan a second look laparotomy:	Never / rarely / sometimes / often / always / unable to comment
17	In the postoperative management of a patient after small bowel resection, do you consider arterial revascularization if not performed before?	Yes / no / unable to comment
18	In the postoperative management of a patient after extensive small bowel resection, would you give parenteral nutrition support?	Yes / no / unable to comment
19	Would you send the patient to another centre for parenteral nutrition support?	Yes / no
20	When would your start parenteral nutrition support?	Immediately Once haemodynamically stable Within 72 hours Within 1 week
21	When would your start oral or enteral nutrition support?	Immediately Within 72 hours Within 1 week Once there is evidence of bowel activity
22	Do you have a nutrition support team that can offer long term (home) parenteral nutrition?	Yes / no
23	If the patient has a distal mucus fistula do you ever consider distal feeding (enteroclysis)	Yes / no / occasionally
23a	If yes, what would you check before initiating distal feeding? (multiple options possible)	No formal checks Length of residual downstream bowel Arterial blood supply to the residual downstream bowel Presence / absence distal strictures
24	For a patient with a jejunostomy and viable distal bowel, would you consider restoring intestinal continuity?	Yes / no
24a	If yes, when will you perform this continuity surgery	On the same admission / prior to discharge After ___ to ___ months Free text
24b	Any other comments about the decision to restore the bowel into continuity?	(free text)

About you & your hospital

Your name (optional)	Free text
Your job title (optional)	Free text
Your profession	Surgeon, physician, radiologist, intensivist, anaesthetist, nurse, dietitian/nutritionist, pharmacist, other (if other: free text)
Your speciality	Free text
Hospital name	Free text
Hospital type	University/teaching hospital, specialist hospital, local/regional hospital, other (if other: free text)
Department (optional)	Free text
Country	Dropdown list of countries

If you are interested in participating in an observational study

Your name	Free text
Your email	Free text