

eSurvey

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

Background

Acute mesenteric ischemia is a multidisciplinary emergency, requiring involvement of several different medical specialties^{1,2}. Different forms of mesenteric ischaemia are encountered and managed by different medical specialties (e.g. emergency care physicians, vascular surgeons, interventional radiologists, visceral surgeons, gastroenterologists, intensivists). Acute mesenteric ischaemia, when diagnosed late, is often associated with lethal or invalidating outcome³. As this disease does not have immediately clear clinical or laboratory phenotype, the diagnosis is not straight-forward, leading to delayed diagnosis and poor outcome.

Pathophysiology of mesenteric ischaemia is similar to acute coronary syndrome, but difficulties in diagnosis and multidisciplinary management have been precluding similar progress. Moreover, probably a historical belief that acute mesenteric ischaemia is 'a deadly syndrome', has additionally inhibited developments in this field. Recent preliminary evidence suggests that a multidisciplinary approach implemented in a specialized centre can achieve high survival rates and lower morbidity.

A uniform algorithm for diagnosis and management of mesenteric ischaemia is currently not available.

The aim of our survey is to assess the different approaches to the management of patients with mesenteric ischaemia and intestinal infarction in different countries and institutions and by different medical specialties. 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 these factors prior to conducting a more formal observational study.

Methods

Electronic questionnaire (see Appendix) will be sent out in two ways:

1) **Team Form:**

This form will be sent to contacts identified by Acute Intestinal Failure Group of ESPEN with the goal to collect responses from the most of European countries and from all continents. One form per hospital is sent and filled as a team effort by different specialists (information on the team is collected). We aim to collect approximately 100 'team' forms.

2) **Individual Form:**

This form will be sent out by different specialist societies to their all members. Information on medical speciality of the responder is collected. We aim to collect approximately 1000 individual forms.

We will contact and ask collaboration from the following societies beyond ESPEN and its regional societies (not a complete list):

EUROPE	ESVS	European Society for Vascular Surgery
	ESICM	European Society of Intensive Care Medicine
	ESAIC	European Society of Anaesthesiology and Intensive Care
	CIRSE	Cardiovascular and Interventional Radiological Society of Europe
	ESCP	European Society of Coloproctology
	EUSEM	European Society for Emergency Medicine
WORLD	BIFA	British Intestinal Failure Alliance
	WSES	World Society of Emergency Medicine
	WFVS	World Federation for Vascular Societies
	WFICC	World Federation of Societies of Intensive and Critical Care Medicine
	WSACS	The Abdominal Compartment Society
	ANZICS	Australian and New Zealand Intensive Care

Danish, Swedish, Norwegian, Italian, British, Spanish, Swiss and Estonian national societies of vascular surgery, (emergency) surgery, (interventional) radiology, gastroenterology, intensive care and anaesthesiology

Definitions

Intestinal ischaemia

Intestinal 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.

Intestinal infarction

Intestinal infarction refers to irreversible transmural necrosis of the intestine due to ischaemia.

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.

Ethics

No patients are involved. No personal data of responders will be processed. Opinions based on experience of respondents will be collected, no real patient cases. Therefore, we do not expect any ethical issues with this survey.

Study protocol

Analyses

Responses with team forms and individual forms will be analysed separately and the results compared thereafter. Responses from different continents and countries, different types of hospitals and specialities will be compared.

Timeline

Application for ESPEN endorsement	December 2020
Distribution of Team form	January 2021
Approval by other distributing societies	January 2021
Data collection (individual survey sent out on 01.02.2021)	01.02.2021-31.04.2021
Data cleaning	May 2021
Data analysis	June 2021
Manuscript preparation	August-October 2021
Manuscript submission	End 2021

Literature

1. Roussel A, Castier Y, Nuzzo A, et al. Revascularization of acute mesenteric ischemia after creation of a dedicated multidisciplinary center. *J Vasc Surg* 2015; 62(5):1251-1256. doi: 10.1016/j.jvs.2015.06.204.
2. Savlania A, Tripathi RK. Acute mesenteric ischemia: current multidisciplinary approach. *J Cardiovasc Surg (Torino)* 2017; 58(2):339-350. doi: 10.23736/S0021-9509.16.09751-2.
3. Luther B, Mamopoulos A, Lehmann C, Klar E. The Ongoing Challenge of Acute Mesenteric Ischemia. *Visc Med* 2018;34(3):217-223. doi: 10.1159/000490318.