

Enteropathy and mesenteric ischemia

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Conflict of interest



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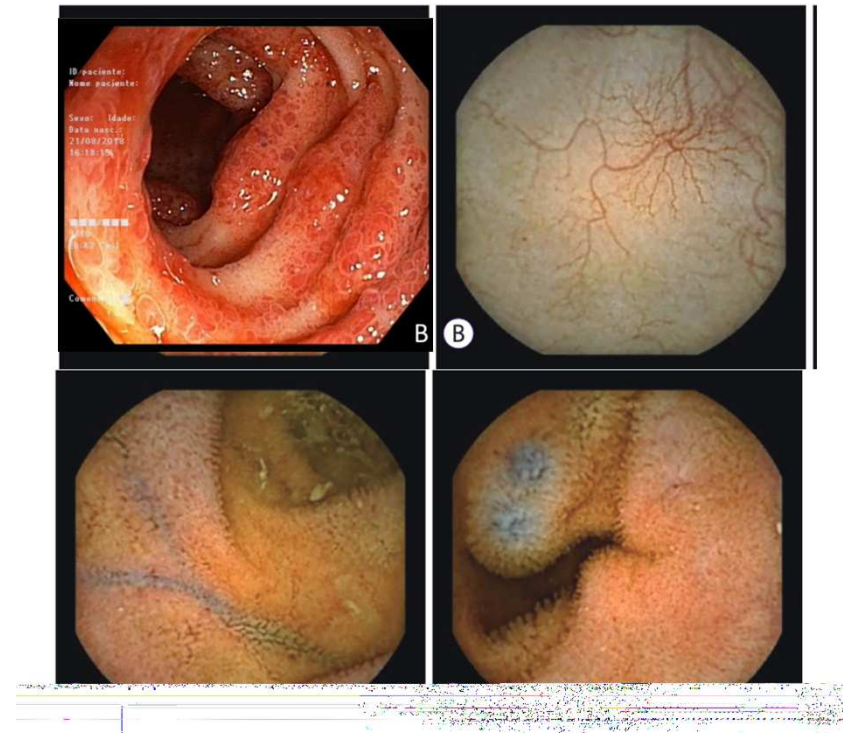
Portal hypertensive enteropathy

PH gastropathy (7-98%)
PH entero/colopathy (15-98%)

Vascular lesions
(red spots, telangiectasias, varices)

Non-vascular lesions
(edema, erythema, polyps)

No consensual objective definition
Heterogeneity of cohort studies



Kumar Goenka, Clin Endosc 2018 ; Rockey, Clin Liver Dis 2019

Chronic GI symptoms

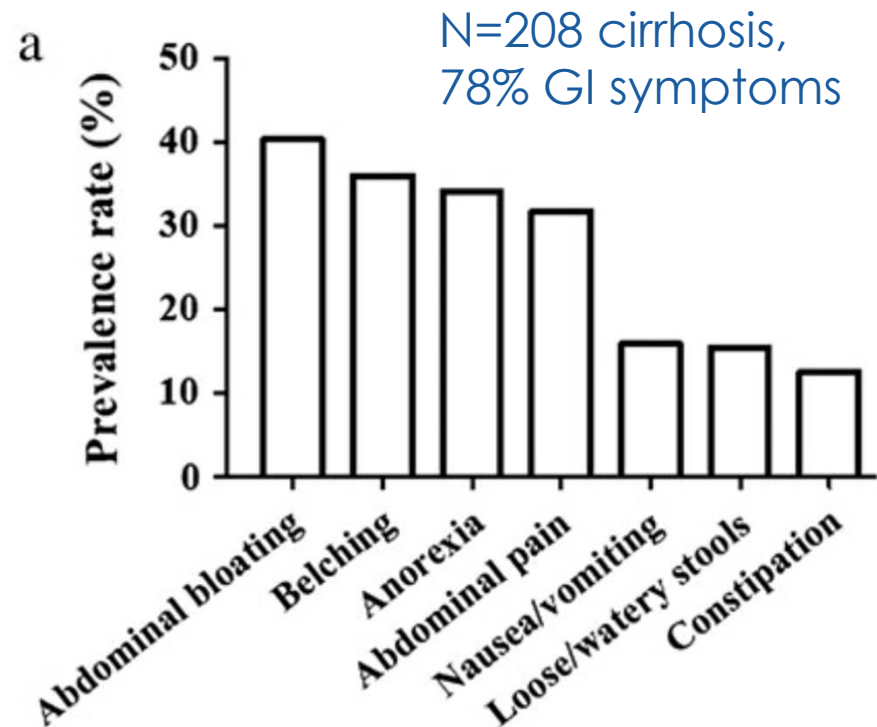
Multifactorial

(dysmotility, SIBO, barrier dysfunction, portal hypertension)

Associated with

- Impaired quality of life
- Anxiety scores
- Child-Pugh / ascites

Case reports of protein-losing enteropathy (hypoalbuminemia >> liver dysfunction)



Xu, Hepatol Res 2017; Ribera, Gut 2013, Milazzo, Hepatology 2018

Acute mesenteric ischemia

AMI patients = 15-20% caused by mesenteric vein thrombosis (MVT)

MVT patients = 40% progression to AMI

Acosta, Scand J Surg 2020

Elkrief et al. 2014 Liver International

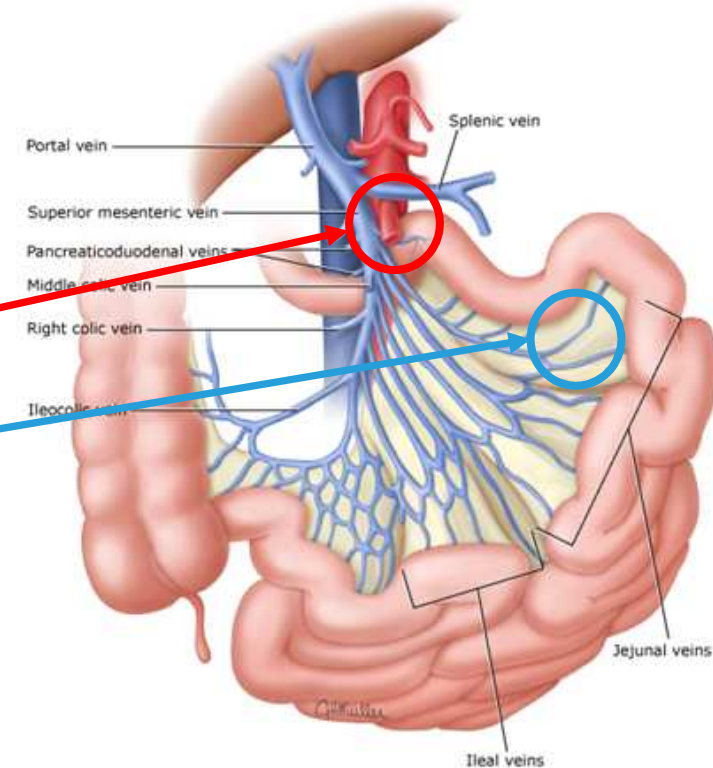
n=57 MVT patients

Factors associated with AMI (n=19):

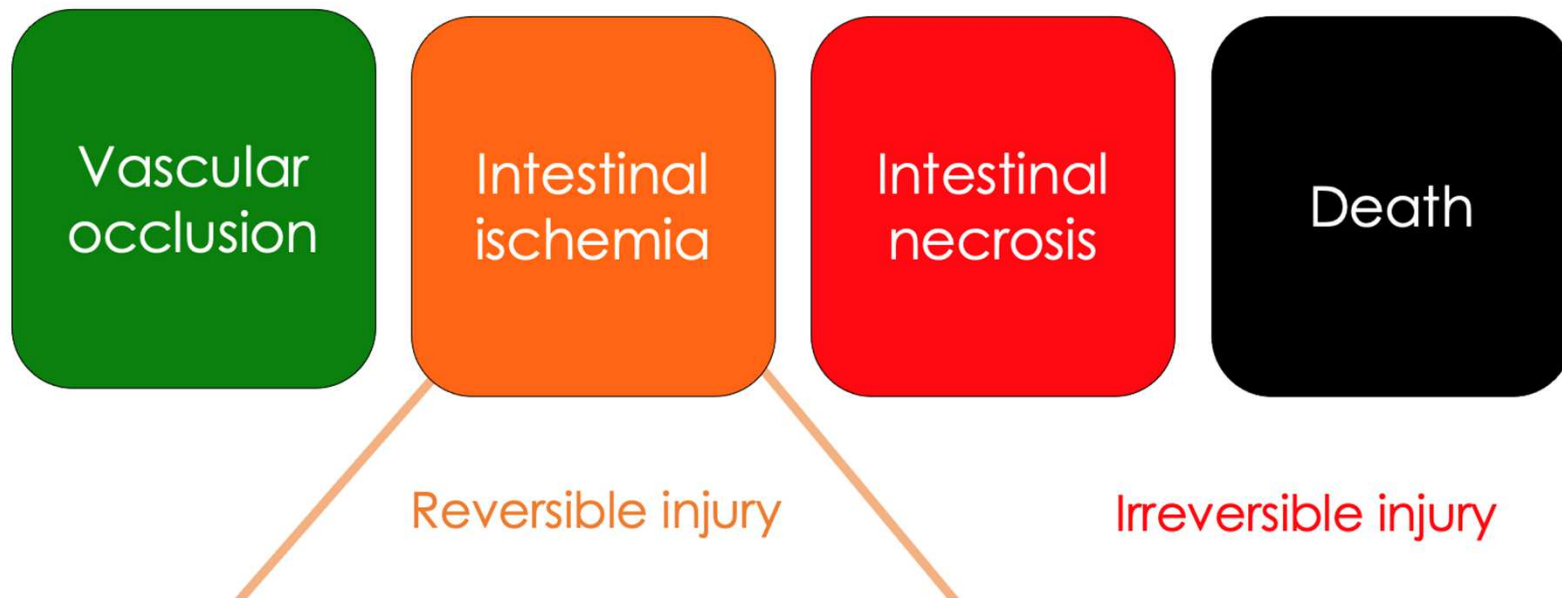
- Diabetes 27% vs 5%, $p=0.02$
- Distal thrombosis, 89% vs. 40%, $p < 0.01$

Proximal jejunum

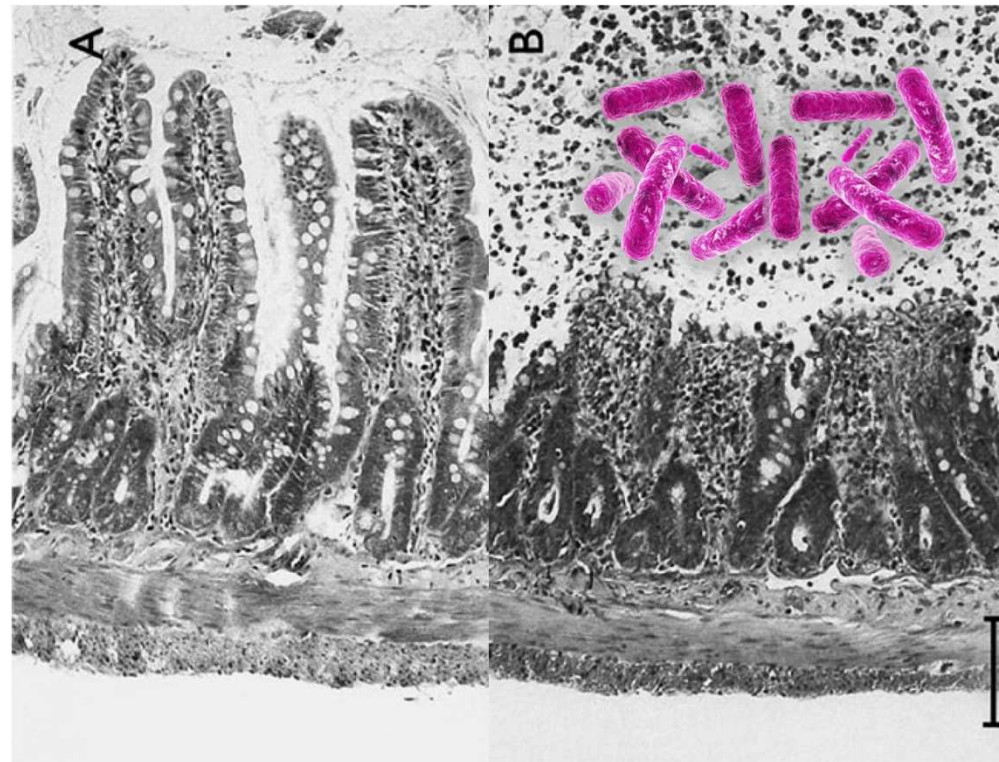
→ total small bowel infarction



Pathophysiology



Ischemic bowel = Infected bowel



Nuzzo A. Corcos O. Rev Med Interne 2017

Mesenteric infarction

**High
early
mortality
10-45%**



**Cause
#1
SBS**

Clair *et al.* NEJM 2016
Joly *et al.* Clin Nutr 2018

Early diagnosis = early multiphasic CT scan

MVT + intestinal signs = ischemia



	PRE-CONTRAST	POST-CONTRAST	PRE-CONTRAST	POST-CONTRAST
Normal aspect				
Thickening Target appearance				
Thinning				
Spontaneous hyperattenuation				
Decreased/absent enhancement				
Paradoxical hyperenhancement				
Dilatation				
Pneumatosis intestinalis				

Copin P *et al.* Eur J Radiol 2018 ; Garzelli *et al.* AJR 2020

Intestinal stroke centers

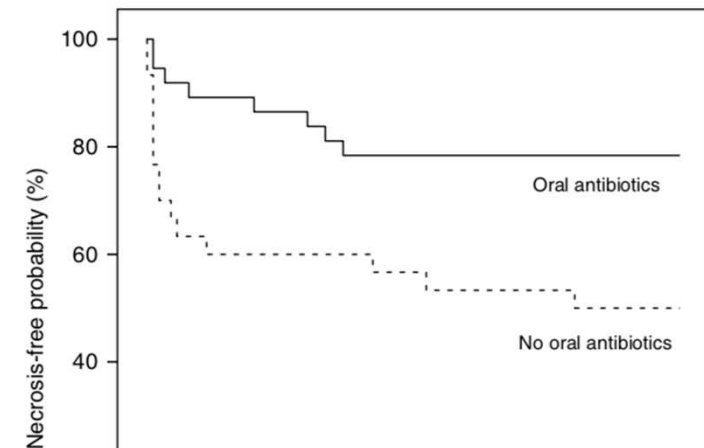


Structure d'URgences Vasculaires Intestinales

2016 : first French intestinal stroke center

Standardized treatment

1. Anticoagulation
2. Bowel rest, PPI, oral and systemic antibiotics
3. Surgical resection of transmural intestinal necrosis



2016 – 2022 ; N=493 IMA

N=87 venous AMI

→ 36% resection, 97% survival

→ 8% SBS, 1% PN dependent

Corcos et al. CGH 2013, Nuzzo et al. Am J Gastroenterol 2019; Nuzzo JFHOD 2023

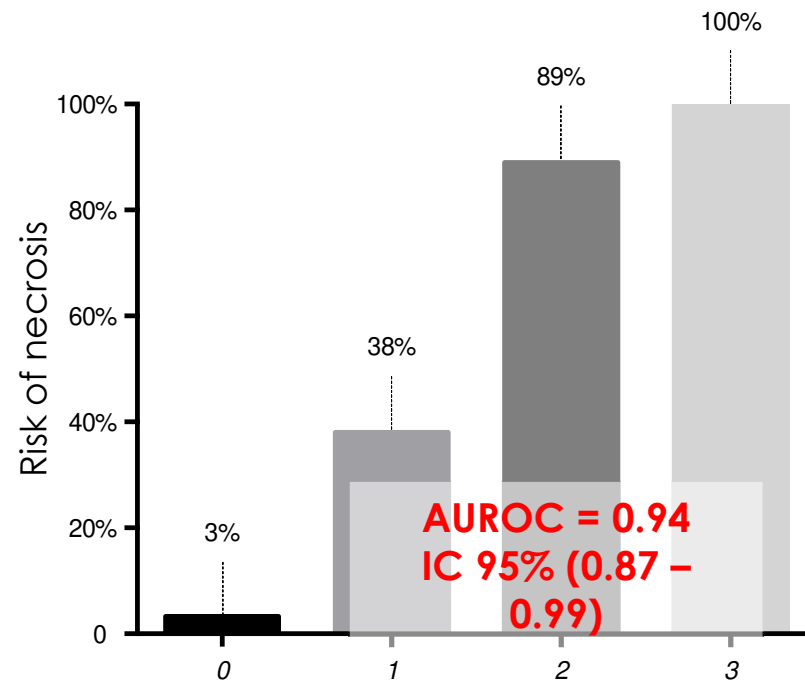
Intestinal necrosis score : inception cohort

n=67 AMI patients, prospective 2009-2015

42% resection, 34% transmural necrosis

**3 independent
risk factors of necrosis**

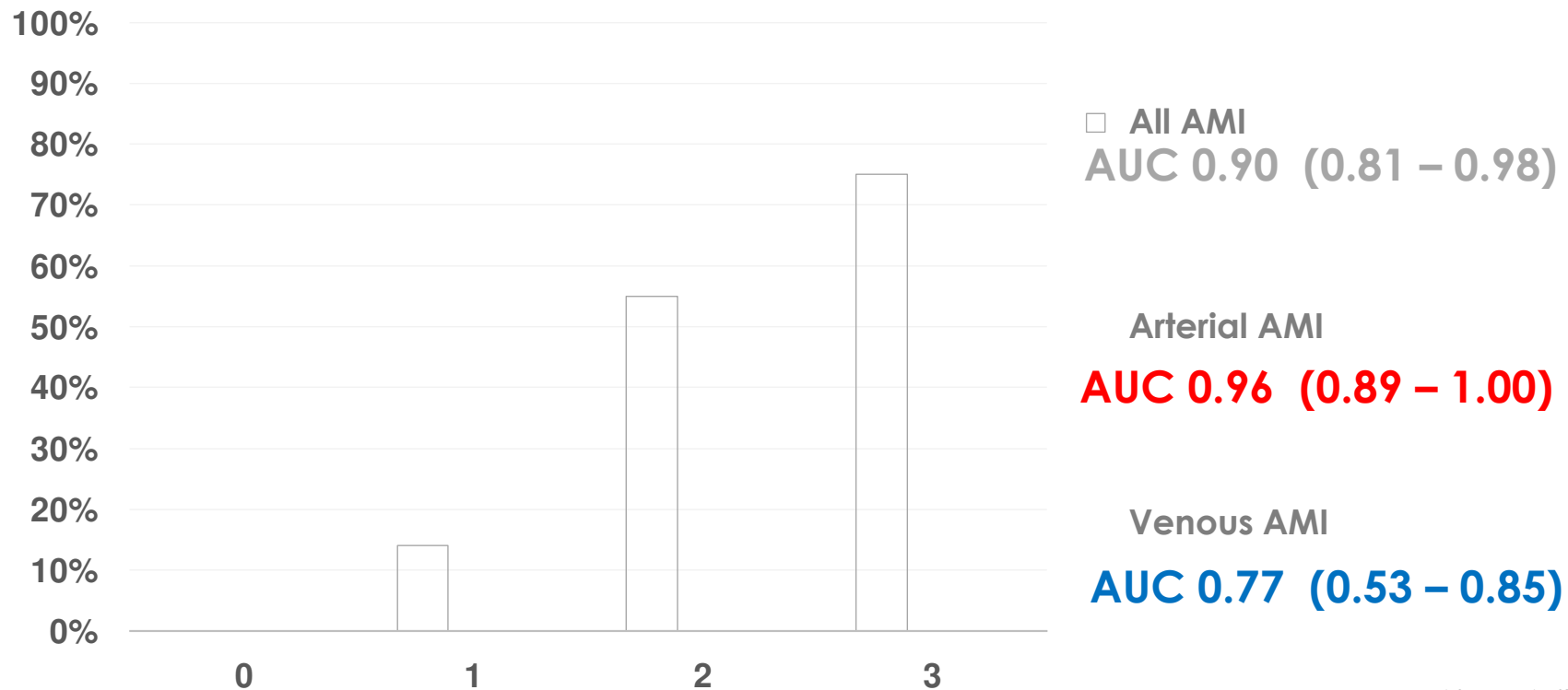
- 1 Organ failure
- 2 Plasma lactate > 2 mmol/L
- 3 Bowel dilatation > 2.5cm



Nuzzo A et al. Am J Gastroenterol 2017

Intestinal necrosis score : validation cohort

n=52 AMI patients, prospective 2018-2020,
35% venous AMI, 27% necrosis



Thrombolysis and endovascular therapy

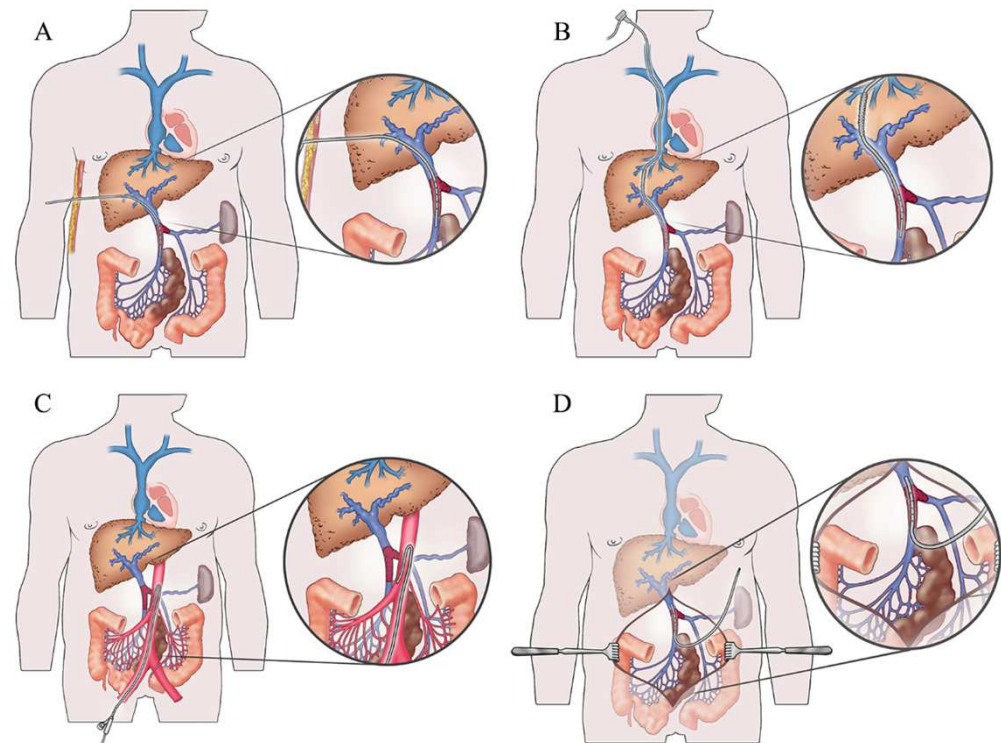
Systematic review 2015-2020

Case reports

10 small sample studies

- 8 centers = no thrombolysis
- **2 centers = 47-72% thrombolysis & 65-78% necrosis**

**Target selected population
= high risk of necrosis
& no improvement with medical therapy**



Acosta et al. Scand J Surg 2020

Unmet needs

1. **Portal hypertensive enteropathy** : diagnostic criteria and clinical significance (GI symptoms, anemia, outcomes...)
2. **Earlier diagnosis of acute MVT / AMI** : biomarkers ? Ddimers ?
3. **Intestinal stroke centers**
4. **Randomized clinical trials** : bowel rest, antibiotics, PPI, supportive measures, fluid resuscitation ?
5. **Venous score of intestinal necrosis** (non-invasive)
6. **Role of thrombolysis and endovascular therapy**



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