MESENTERIC ISCHAEMIA

Pain out of proportion · the missed abdominal killer

SUSPECT
it early

PAIN OUT OF PROPORTION: severe pain with a soft, unremarkable abdomen = mesenteric ischaemia until proven otherwise. High mortality; diagnosis is delayed - suspect it and image early.

FOUR MECHANISMS

ARTERIAL EMBOLIC

Commonest. AF / cardiac source → SMA. Sudden severe pain.

ARTERIAL THROMBOTIC

Atherosclerosis; often prior 'intestinal angina'. Slower onset.

NON-OCCLUSIVE (NOMI)

Low-flow: shock, vasopressors, dialysis. No occlusion on CT.

VENOUS THROMBOSIS

Hypercoagulable / portal HTN. Subacute pain; younger.

DIAGNOSE

- **CT angiography -** the test of choice (arterial phase) - do it early, do not wait for lactate
- **Lactate / acidosis -** rises LATE; a normal lactate does not exclude it
- **Bloods -** leukocytosis, metabolic acidosis, raised amylase (non-specific)
- **Do not delay -** for equivocal signs - late diagnosis = dead bowel

MANAGE

resuscitate + revascularise

- **Resuscitate -** fluids, broad-spectrum antibiotics, correct acidosis; NG decompression
- **Anticoagulate -** IV heparin early (unless contraindicated)
- **Revascularise -** urgent surgery or endovascular; resect necrotic bowel; second-look laparotomy
- **NOMI -** treat the low-flow cause; minimise vasoconstrictors; intra-arterial vasodilator

CLUES TO THE MECHANISM

the history often tells you

EMBOLIC

AF, recent MI, prosthetic valve; SUDDEN severe pain. Anticoagulate; embolectomy.

THROMBOTIC

Atherosclerosis, weight loss + 'food fear' (intestinal angina); slower onset.

NOMI / VENOUS

NOMI: shock, pressors, dialysis. Venous: hypercoagulable / portal HTN, subacute.

AFTER REVASCULARISATION: planned second-look laparotomy at 24-48 h; resect any non-viable bowel. Long-term anticoagulation for embolic / venous disease; treat the source (AF, atherosclerosis). Expect prolonged ileus / short-gut and high mortality.

PEARLS & PITFALLS

- Pain out of proportion to the exam is mesenteric ischaemia until proven otherwise - image immediately.
- CT angiography is the test - get it early rather than waiting for the abdomen to become peritonitic.
- A normal lactate does NOT exclude it; lactate and acidosis are late, signalling dead bowel.
- In NOMI, vasopressors worsen the problem; treat the low-flow state and involve surgery early.

References: WSES Acute Mesenteric Ischaemia 2017 · standard surgical & critical-care references.

Educational aid; verify doses against local protocol and patient factors.