INTESTINAL VASCULAR DISEASE

Occlusive/Non-occlusive

ACUTE MESENTERIC ISCHAEMIA

OCCLUSIVE: thrombosis (atherosclerosis)/(cardio)embolism/dissection into origin/graft (eg IMA after AAA repair)
NON-OCCLUSIVE: inadequate mesenteric perfusion/poor oxygenation/vasospasm (ITU patients on inopressors)
Commonest: SMA embolic occlusion (50% of all)
Unusual: arteriopathies eg Takayusu's, fibromuscular dysplasia, polyarteritis nodosa, SMA dissection

Pathophysiology: (regulation of mesenteric flow: intrinsic (autoregulation) and extrinsic (neurohumoral/drugs)
-bowel copes with ischaemia for about 12 hours; collaterals open
-prolonged: vascoconstriction raises resistance →impairs collateral flow
-ischaemia threatens mucosal barrier →translocation of bacterial endotoxins, cytokines etc → sepsis/MOF
-reperfusion injury: free radicals, cytokines etc released

Clinical Features:
Acute **abdominal pain** out of proportion to physical signs
Diarrhoea (watery +/- blood) *small bowel infarcts, large bowel ischaemic colitis with PRB*

Management:
Resuscitate→heparinise→Laparotomy (pulsatile SMA ie embolus: **embolectomy**/non-pulsatile ie thrombosis: **vein bypass**)
Resect non-viable bowel; **exteriorize** and **laparostomy;** relook and re-resect as necessary
Post-op: lifelong **anticoagulation** + treat **underlying risk** factors esp of atherosclerosis
Outcomes: better if embolus vs thrombosis

CHRONIC MESENTERIC ISCHAEMIA

90% atherosclerotic
10% non-ath (aneurysm thrombus, dissectn, arteritis, FMH, NF, radiation, cocaine, Buerger's, coel compression)
Diagnosis: postprandial abdominal **pain → food fear → weight loss** (50%) || **bruit** (70%) || **underlying** conditions
Investigations**: Mesenteric US Duplex USS**/CTA/MRA
Surgery: BYPASS with prosthetic graft (a)Antegrade: supracoeliac AA (b)Retrograde: infrarenal AA/iliacs (less kinking)
Endovascular: angioplasty + stent= less morbidity and complications ||more recurrence
Follow-up: 4-6 mthly duplex US; symptoms a poor sign of occlusion

MESENTERIC VENOUS THROMBOSIS

(a)Primary or (b)**Secondary** to **hypercoagulable states/stasis** (portal HTN) **etc**
CT: thrombus/air in mesenteric or portal vein/absent collateral flow
Treatment**: resection** and long term **anticoagulation**

ACUTE NON-OCCLUSIVE MESENTERIC THROMBUS

ITU patients esp in sepsis/MOF with high dose a agonists (inopressors) (digoxin, cocaine)
Angio: severe arterial spasm/excludes intrinsic arterial lesion
Treat: increase cardiac output/wean inopressors/treat underlying condition/papaverine or glucagon increase flow
Mortality 70-80%

COELIAC AXIS COMPRESSION SYNDROME

Aorta and axis move down in inspiration/up in expiration → compressed under median arcuate ligament
1) chronic ischaemia 2) post-stenotic dilatation w/ aneurysm formation
Surgery: division of median arcuate ligament (stenting ineffective due to compression)