A weird presentation of blunt injury abdomen

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Abstract:
Mesenteric vascular ischemia is a disease of high mortality which presents in varied scenario. Here we describe one such bizarre clinical presentation.

Keyword: RTA, blunt injury abdomen, mesenteric ischemia

A 48 years old man met with a road traffic accident (two wheeler vs. auto) under alcohol influence. He presented in the casualty 24 hours later with vomiting. No history of LOC, seizures, ENT bleeding.

O/E patient conscious oriented afebrile GCS 15/15. Pulse-106/min, blood pressure 150/90, CVS-S1 S2+, RS- NVBS. Per abdomen guarding rigidity present, bowel sounds absent. Per rectum anal tone normal, no mass or ulcer, fecal staining present.

INVESTIGATIONS
Complete hemogram was normal, renal function was normal, ECG- normal sinus rhythm, radiograph-right femur intertrochanteric fracture, right distal radius fracture. Sonogram- perisplenic collection, free fluid abdomen, left pleural effusion. CECT abdomen- perisplenic collection, free fluid abdomen. CT brain- right frontal contusion. With this scenario, we made a provisional diagnosis of RTA/BLUNT INJURY ABDOMEN -PERITONITIS., and proceeded with laparotomy.

PROCEDURE
On laparotomy,
GANGRENOUS BOWEL
300 ml of sero sanguinous fluid drained. Two feet terminal ileum was gangrenous. Superior mesenteric artery pulsation felt – feeble. Inferior mesenteric and celiac axis were normal. Other visualized organs were normal.

THROMBUS IN VESSELS

Procedure
Resection of gangrenous bowel and exteriorization of both the ends done Post operative day 14.

Patient was monitored in ICU with higher antibiotics, anticoagulants – LMWH.
Patient recovered well, stoma was functioning well and patient shifted of ICU on day 13. Later patient started on oral Acenocoumarol 4mg/day. Patient was discharged on day 28 and advised to come for review after a week. Patient did not return for further follow up.

THINGS TO PONDER - POST TRAUMA

In hypotension blood is diverted to periphery to compromise mesenteric vessels.

Any emboli (fat) could have occluded the vasculature.

Plaque rupture of atheromatous lesion could have caused thrombosis of mesenteric vessels.

CT ANGIOGRAPHY POST OPERATIVE DAY 20

CT ANGIOGRAM DAY 20

Multiple vascular injuries
Pseudo aneurysm aorta D8
Coeliac occlusion with distal reformation occlusion distal branches of SMA
Thrombosis in segmental branches of RT portal vein
Multi organ injuries.
BILATERAL RENAL INFARCTS SPLENIC INFARCT

DISSCUSSION

MESENTERIC ISCHEMIA

Fortunately it remains a rare occurrence, mortality rates at 30% to 90% depending on aetiology, Mesenteric ischemia usually involves the small intestine, Usually occurs in people older than age 60, Smoker or high cholesterol levels.

Causes

Arterial embolus (30 – 50 %)
Arterial thrombosis, (15 – 30%)
Venous thrombosis limiting arterial inflow,
Extrinsic compression of mesenteric vessels.

Types of mesenteric ischemia

Embolic (30 -50 %)Atrial fibrillation, Myocardial Infarction,Lt->Rt shunt70% at Superior Mesenteric Artery - almost parallel to AortaDistal to middle colic - sparing duodenum T.colonSudden onset of pain - out of proportion to signsPeritoneal findings may occur lateTriad of abdominal pain, bloody stools, and fever

Thrombotic Arterial ( 15 – 30% )Most morbid of all types90% mortality in several studiesProximal thromboses more commonH/O Chronic mesenteric ischemia (CMI) weight loss, abdominal pain, and food fear

Thrombotic venousMortality rate between 20- 50%Cirrhosis or portal hypertension (most common)Malignancy, pancreatitis, oral contraceptives, factor_v leiden, protein c deficiency.50% have h/o deep vein thrombosis or pulmonary emboli

INVESTIGATIONS

Plain abdominal radiographs Thumbprinting Pneumatosis Portal venous gas Pneumoperitoneum All are indicative of infarcted bowel CT ABDOMEN Bowel wall thickening from edema or hemorrhage Lack of enhancement indicates infarction Pneumatosis, portal venous gas, pneumoperitoneum Intraluminal thrombus in involved vesselCT Angiography Angiography is the gold standard Aortography Duplex studies are highly specific not as sensitive MRI / MRA MRI and MRA provide findings similar to CT scan in AMI. MRA is particularly effective for evaluating MVT.

MANAGEMENT

Surgical therapy (Ac / chr)
Mesenteric bypass can be performed.
¨ Antegrade fashion, or Retrograde
¨ unless bowel is frankly necrotic, revascularization tried before bowel resection
Endogenous saphenous vein grafts PTFE prosthetic grafts Thrombectomy. Embolectomy. Transaortic endarterectomy. Endovascular therapy limited to the chronic form Medical Care
Angiographically infused papaverine Angiographically infused thrombolitics Do not improve within 4 hours or if peritonitis develops, stop the infusion and perform surgery. Angioplasty after thrombolysis Heparin for Mesentric vein thrombosis
If no bowel necrosis


Miyamoto N, Sakurai Y. Endovascular stent placement report of a case. Radiat Med

