Is this a CT of a greyhound? A case of Superior Mesenteric Artery Syndrome

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Introduction

- Superior Mesenteric Artery (SMA) Syndrome- rare disease caused by compression of the third portion of the duodenum from loss of the intervening fat pad between the superior mesenteric artery and the aorta.
- Incidence rate 0.1-0.3% usually in patients with chronic debilitating illness that lead to severe weight loss.
- Symptoms are usually nonspecific therefore diagnosis requires a high index of suspicion.

Case

- 31-year-old year-old male with unintentional 40lb weight loss and oral intolerance for 6 months.
- Previously intentionally losing weight in preparation for his military physical fitness assessment.
- He had 5 months of persistent symptoms progressing to post-prandial epigastric pain, nausea, and vomiting.
- His pain and weight loss became intractable, leading to a hospital stay for further assessment and symptomatic management.

Case cont

- Upper endoscopy revealed significant compression of the third portion of the duodenum as well as retained residue in the stomach despite 24 hours of fasting.
- Cross sectional imaging confirmed the diagnosis with an aortomesenteric angle of 9° and aortomesenteric distance of less than 5mm.

Discussion

- After aggressive caloric repletion of 3-4000 calories/day he slowly regained weight over the next 6 months.
- We present a case of SMA syndrome after intentional weight loss for military service requirements, with initial endoscopic findings concerning for duodenal outlet obstruction.
- Normal angle between the superior mesenteric artery and aorta ranges from 38 - 65° with a distance of 10 to 28mm. Symptomatic compression usually begins with an angle of 22-28 degrees.
- SMA is typically diagnosed with cross sectional imaging. Rarely is it noted on endoscopy first.
- Most can recover with aggressive nutritional support however 25-30% fail to gain weight, requiring surgical intervention.
- Important to consider SMA in patients with unexplained weight loss as late diagnosis can lead to significant morbidity and mortality associated with the severity of malnutrition.

References
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