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### **Duplicated Inferior Vena Cava Thrombosis Mimicking Acute Pancreatitis in a COVID-19 Patient**

The incidence of inferior vena cava (IVC) thrombosis has increased due to COVID-19-associated coagulopathy. While the diagnosis of an IVC thrombosis can present the clinician with a significant challenge, the odds of developing a symptomatic IVC thrombosis in a person with a congenital malformation leading to duplicate IVCs may present an even greater challenge.

An 86-year-old woman presented with 3 weeks of epigastric pain and leg swelling. Her exam revealed superficial abdominal vessel dilation, epigastric tenderness, and leg edema. Laboratory testing showed a lipase of 260 U/L and PCR testing positive for COVID-19. Abdominal imaging was without pancreatitis, but demonstrated a duplicated inferior vena cava with a thrombus noted within the right IVC extending from the iliac venous confluence to the level of the infrarenal right IVC. Low-molecular-weight-heparin was given subcutaneously and she was eventually discharged on oral apixaban.

Duplication of the IVC occurs when the left supracardinal vein fails to regress; and thus both supracardinal veins persist. Clinical presentation varies depending on the position of the IVC thrombus. The pathophysiology of IVC thrombus formation may be due to the turbulent flow of blood through two separate inferior vena caval vessels. The turbulent flow within these large vessels leads to endothelial damage and forms countercurrent pockets of venous stasis; which promote thrombus formation. Falsely elevated lipase can be attributed to venous congestion due to the anatomical vasculature of the pancreas which ultimately empties into the IVC. The most common imaging modalities to support the diagnosis include U/S, CT, MRI, and direct catheter venography. Treatment involves anticoagulation, but thrombectomy and systemic thrombolysis can be considered. Because the incidence of IVC thrombosis has increased due to the hypercoagulable state of those with COVID-19, clinicians should be increasingly suspicious in these cases.