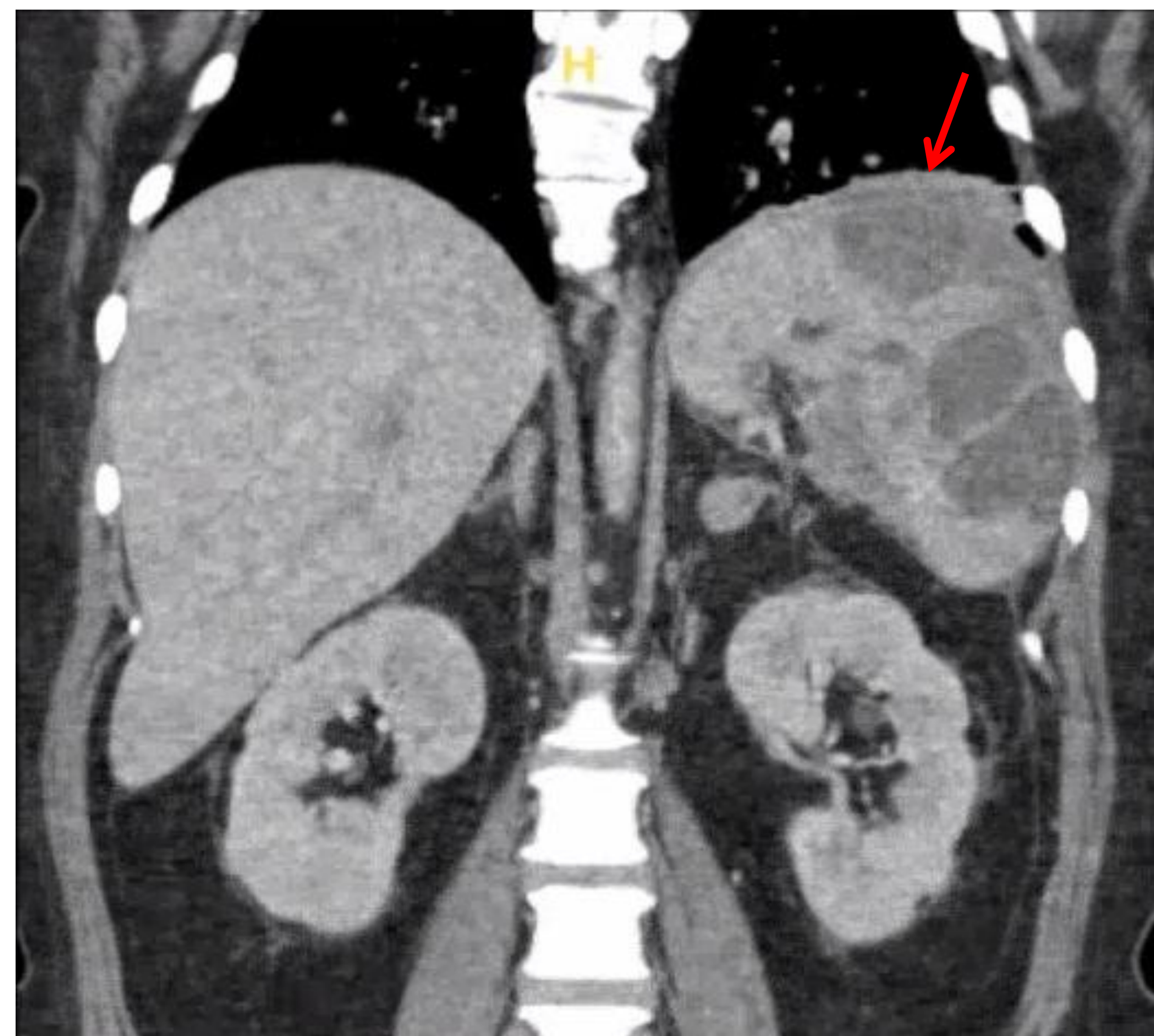


Introduction

Referred pain can often be a clue to an underlying diagnosis. Particular to this case, there is a well-documented connection between diaphragmatic irritation and referred pain to the ipsilateral shoulder.

Case Presentation

A 43-year-old female with a past medical history of type 2 diabetes, pancreatitis, hypertension, hypertriglyceridemia, polycystic ovary syndrome and endometriosis status post a total hysterectomy with bilateral salpingo-oophorectomy on estrogen replacement therapy, class 1 obesity, and tobacco use disorder was hospitalized with pancreatitis three months prior to presentation. However, after discharge from that hospitalization, she began experiencing worsening epigastric and left hypochondriac abdominal pain, as well as left shoulder pain. She was seen by a provider for her left shoulder pain and underwent workup for arthritis, including autoimmune disease which was unrevealing, and imaging did not show any structural shoulder abnormality. With continued symptoms, she presented to an outside hospital. An abdominal CT revealed portal and splenic vein thromboses with multiple areas of hypodensity in the spleen. She was transferred to our facility for vascular surgery evaluation and started on a heparin drip. She was evaluated by multiple specialty services, including hematology, gastroenterology, interventional radiology, and vascular surgery. She was determined not to be a candidate for intervention of her thromboses. The areas of hypodensity of her spleen were determined to be infarctions. She underwent an extensive hypercoagulable workup, prior to induction of oral anticoagulation, which was unrevealing.



Case Presentation

After discussion with our hematologists, her estrogen replacement therapy, smoking history, obesity, and history of pancreatitis likely contributed in a multifactorial fashion to a hypercoagulable state. Her abdominal and shoulder pain improved slowly throughout her hospitalization. She was discharged on apixaban for anticoagulation and counseled on reduction of underlying risk factors. She will have close follow-up with hematology.

Discussion

This patient's left-sided abdominal pain with associated left shoulder pain should have raised concern for left hemidiaphragmatic irritation with referred pain to her left shoulder, as the phrenic and supraclavicular nerves share the same C3, C4, and C5 nerve roots. Pancreatitis is not known to be associated with shoulder pain; therefore, new shoulder pain in this patient was indicative of an alternate intraabdominal process. In this case, splenic infarctions.

Conclusions

This case emphasizes the importance of incorporating parsimonious medicine, or the use of the principle of Ockham's razor, into practice to increase the yield of diagnostic workup.

References

1. Samara QA, Jarrar S, Daoud SS, Odeibat YM, Alomari AA. Referred Shoulder Pain Due to the Positioning of the Ventriculoperitoneal Shunt: A Case Report and Literature Review of an Unusual Complication. *Cureus*. 2024 Jul 4;16(7):e63819. doi: 10.7759/cureus.63819. PMID: 39100068; PMCID: PMC11297721.