



CASE REPORT

A Case Report of Idiopathic Retroperitoneal Fibrosis Causing Bilateral Ureteral Obstruction and Pancreatic Tail Destruction

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Clinical History

A 72-year-old woman with a history of acute renal failure treated with a bilateral double-J stent, presented with subacute bilateral lumbar pain, mild fever, and weight loss. Physical examination was normal, except for bilateral lumbar sensibility. Laboratory tests were normal an abdominal CT scan has been performed.

Imaging Findings

Post-contrast CT showed paraspinal and irregularly contoured soft tissue mass, not enhanced, infiltrating the periaortic soft tissues, invading the anterior perirenal space (Figure 1) and surrounding the left adrenal gland (Figure 2).

This process damages the tail of the pancreas and infiltrates the distal third of the transverse colon (Figure 1). It is extended and encased bilaterally the pelvic uretere at the level of the L4 vertebra (Figure 3).

Discussion

A. Retroperitoneal fibrosis is a rare fibro-inflammatory disease characterized by an extensive fibrous formation in the retroperitoneal space. It can be classified as idiopathic also known as Ormond's disease or secondary. It is idiopathic in most cases (> 75%) [1] but it can be secondary to surgery, malignant disease, radiation exposure, or retroperitoneal bleeding

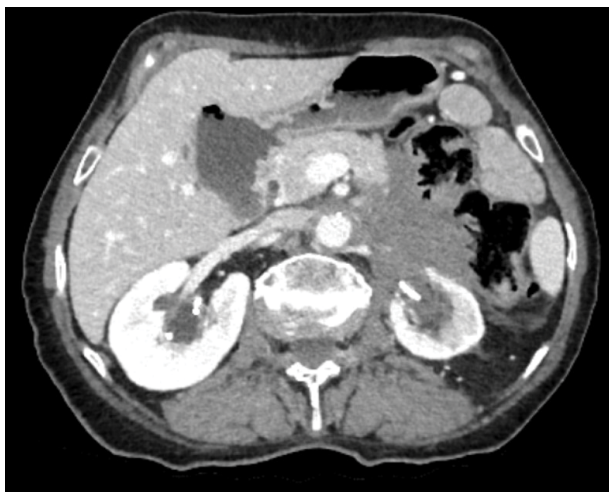


Figure 1: Paraspinal soft tissue mass extended to left anterior perirenal space, destructing the pancreatic caudal parenchyma.

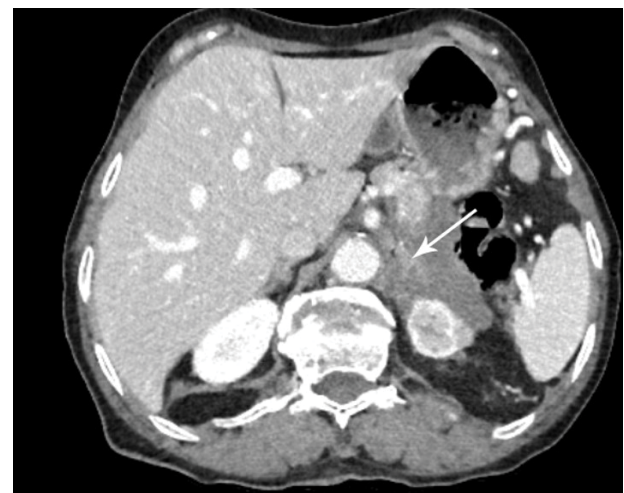


Figure 2: Adrenal gland (arrow) surrounded by retroperitoneal fibrosis.

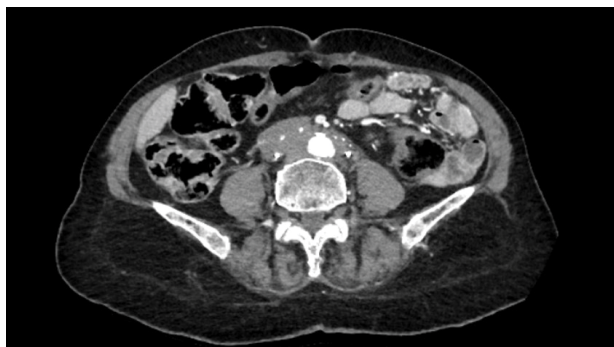


Figure 3: Soft-tissue density in the retroperitoneum extended and encased the abdominal part of the bilateral ureter.

[2]. Idiopathic retroperitoneal fibrosis is due to an inflammatory reaction to an atherosclerotic plaque of the abdominal aorta [3].

- B. The most common symptoms signs are back pain and abdominal pain. The diagnostic is often delayed due to non-specific clinical presentation [4].
- C. Imagery is useful in the diagnosis, prognosis, and differential diagnosis.

Sonography has a low sensibility and it shows hypoechoic or anechoic, irregularly contoured retroperitoneal mass.

CT detects the retroperitoneal fibrosis as paraspinal, well-demarcated although irregularly contoured mass that is iso-dense surrounding muscle. It shows the extension of fibrosis, which may occur anteriorly to involve the pancreas, duodenum, and spleen. There is a correlation between the activity of the fibrotic process and the degree of enhancement. CT is also useful to detect the primum movens such as abdominal aortic aneurysms or inflammation. CT may be beneficial to differentiate between benign retroperitoneal fibrosis from neoplasia, malignant

retroperitoneal fibrosis tends to be larger and display a mass effect.

On MRI, the soft tissue mass is hypointense on T1W and T2W unless there is an active inflammatory process whereby it is hyperintense on T2W images [5].

- D. Idiopathic retroperitoneal fibrosis is usually treated with steroids in the early stages, surgical treatment may be needed in case of ureteral obstruction. Early and properly treated, idiopathic retroperitoneal fibrosis has a good prognosis. Otherwise, it can cause severe complications such as chronic renal failure [3].
- E. Retroperitoneal fibrosis is a rare but serious disease. If early and properly treated and diagnosed, it has a good outcome.

Final Diagnosis

Idiopathic retroperitoneal fibrosis.

Differential Diagnosis List

Retroperitoneal bulky lymphoma, retroperitoneal sarcoma, and retroperitoneal metastatic lymphadenopathy.

References

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5. Cronin CG, Lohan DG, Blake MA, Roche C, McCarthy P, et al. (2008) Retroperitoneal fibrosis: A review of clinical features and imaging findings. *AJR Am J Roentgenol* 191: 423-431.