Clinics in Surgery

Case Report
Published: 16 Aug, 2021

XGP Masquerading as Cystic RCC: A Case Report

*Rohit Kumar Singh, Hiranya Deka and Appu Thomas**

Department of Urology, Amrita Institute of Medical Science, India

Abstract

Xanthogranulomatous Pyelonephritis (XGP) is great masquerador, it can mimic renal tumour, renal tubercular abscess, can even mimic pericolic inflammatory disease or carcinoma colon. Here we present an instance where XGP was misdiagnosed as Renal Cell Carcinoma (RCC).

Introduction

XGP is the chronic infective process in the kidney causing destruction of renal parenchyma [1,2]. It has various presentations, ranging from pain with fever to totally asymptomatic renal mass found incidentally. It's known to mimic virtually every other inflammatory disease of the kidney as well as renal cell carcinoma on radiographic examination. This condition is associated with urinary tract obstruction, renal calculus and chronic infection. Most common organism being *Proteus mirabilis* and *E. coli* [3,4]. It can invade surrounding structures and mimic malignancy.

Case Presentation

A 42 years gentleman presented to us with history of hematuria with weight loss. He had occasional pain in the flank region. Symptoms were associated with LUTS. He was evaluated with CECT and was found to have left renal cystic lesion in mid pole of the kidney with thick enhancing septations and few calcification. Features were suggestive of cystic neoplasm of the kidney. PET-CT done was suggestive of left renal cystic lesion with infiltration into the spleen and para-aortic node. Urine cytology was negative (Figure 1). Urine culture was negative. It was planned to go ahead with Left radical nephrectomy with splenectomy. Gross section of specimen showed variegated lesion on the posterior surface of the upper pole measuring 2 cm × 3 cm. The cut surface shows variegated lesion measuring 4.5 cm × 4.5 cm × 2 cm involving the upper pole and the inter polar lesion. The lesion appears to infiltrate grossly. Spleen: The external surface shows pale looking area measuring 4.5 cm × 4 cm. On one aspect irregularity is notes measuring 10 cm × 4 cm (Figure 2). Microscopic description shows dense inflammation composed of abundant foamy histiocytes along with plasma cells, lymphocytes and neutrophils. Increased vascularity is noted with perivascular lymphocyte infiltration and areas of fibrosis. Inflammatory cell infiltration is noted into perinephric fat. Lymph nodes show reactive changes.

Discussion

XGP is an unusual complicated form of pyelonephritis. The first descriptions of the specific macroscopic features of this disease were made by Schlagenhaufer in 1916 [4]. Its name is derived from the yellow (xantho) color on gross pathology and granulomatous reaction histologically.

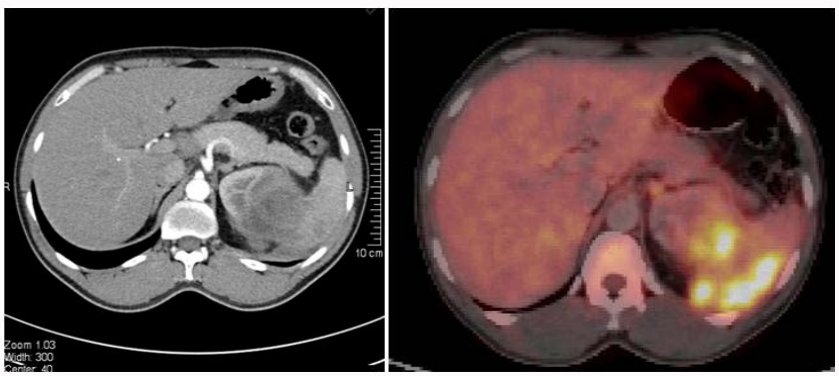

Figure 1: A) CT suggestive of involvement of kidney with invasion into the spleen. B) PET CT showing uptake in kidney and spleen.

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Correspondence:
Appu Thomas, Department of Urology, Amrita Institute of Medical Science, Kochi, India, Tel: 9946357681; E-mail: apputhomas@aims.amrita.edu

Received Date: *16 Jul 2021*
Accepted Date: *12 Aug 2021*
Published Date: *16 Aug 2021*

Citation:
Singh RK, Deka H, Thomas A. XGP Masquerading as Cystic RCC: A Case Report. Clin Surg. 2021; 6: 3282.

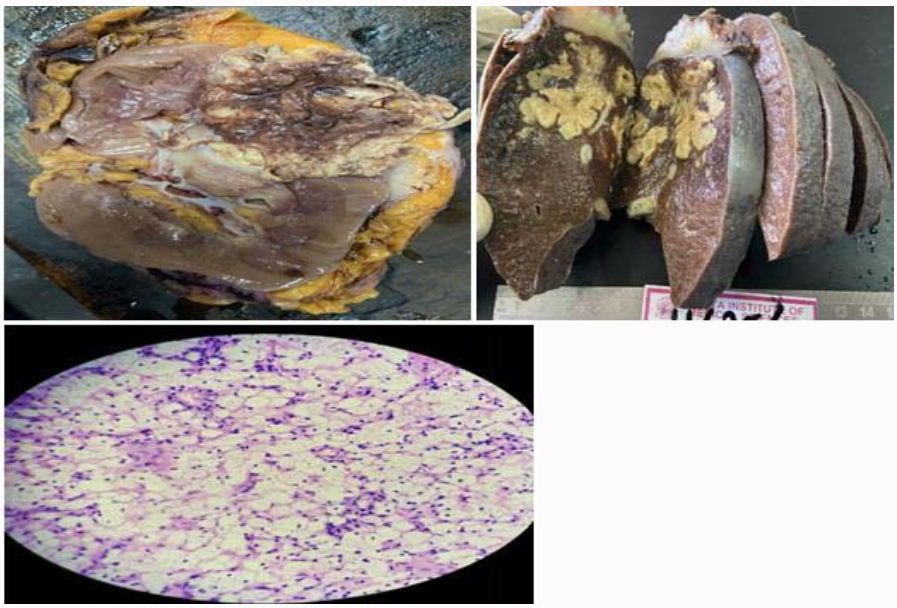

Figure 2: A and B) are gross specimen of kidney and spleen. C) Microscopic image from the kidney.

Clinical presentation includes malaise, fever, flank pain, weight loss, and is usually associated to urinary calculi or UTI. Usual laboratory findings include anemia, high CRP and liver dysfunction. Computed tomography scan revealed poor cortical enhancement of the kidney, but some of the images bore resemblance to the characteristic "bear's paw" sign, consistent with XGPN [5]. Having a pre operative diagnosis is difficult as it virtually mimics every other inflammatory disease of the kidney. So majority of the patient end up having nephrectomy. In our case also we had diagnosis if Cystic neoplasm of the kidney, infiltrating the spleen, so decision was made to go ahead with nephrectomy. Final histopathology was suggestive of XGP.

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