Bilateral Renal Cortical Necrosis: A Rare Complication of Acute Pancreatitis

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Clinical Image

A 21 year old male patient presented in emergency department with epigastric pain radiating to back since 2 days and vomiting & anuria since 1 day. Lab investigation revealed high serum amylase (1593 IU/L) and high serum lipase (2389 IU/L). Serum creatinine on presentation was 5.8 mg/dl and it reached to 11.4 mg/dl on 3rd day of admission.

Contrast-Enhanced Computed Tomography (CECT) scan of abdomen revealed bulky and non-enhancing pancreatic parenchyma with significant pancreatic and peripancreatic fat necrosis (Figure 1). Bilateral kidney showed hypoenhancement of renal cortex compared to renal medulla (reverse rim sign), suggestive of acute renal cortical necrosis (Figure 2). CT findings finally were suggestive of acute necrotizing pancreatitis with acute collection with bilateral renal cortical necrosis.

Only 8 to 10 cases of cortical renal necrosis following acute pancreatitis have been reported in literature till date. Obstetric emergencies account for the majority of the cases. A study from India showed that 56.6% of the Renal Cortical Necrosis (RCN) is pregnancy-related. The etiology of non-obstetric RCN includes hemolytic uremic syndrome, viperine snake envenomation, renal allograft rejection, sepsis, severe burns, acute pancreatitis, shock; diabetic ketoacidosis [1]. The prognosis is very often grim with nearly all patients end up in renal replacement therapy after variable period.

Figure 1: CECT of abdomen showing bulky and non-enhancing pancreatic parenchyma (arrows) and multiple fluid collections formation in lesser sac and in bilateral paracolic gutter (arrow heads).

Figure 2: CECT axial section of abdomen showing hypoenhancement of cortex as compare to medulla in both kidneys (arrows).

Reference