



# A Case of Concurrent Cholecystitis and Stauffer Syndrome

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## Abstract

Stauffer syndrome (SS) is a paraneoplastic syndrome seen in some malignancies, most commonly 4-15% of primary renal cell carcinomas, resulting in nephrogenic hepatic dysfunction.

SS commonly results in elevated alkaline phosphatase, alanine aminotransferase, aspartate aminotransferase, and prothrombin time (PT) as well as decreased albumin in the absence of liver metastasis. The etiology of SS is unknown, although three have been suggested: elevated interleukin-6, elevated colony stimulating factor or, least likely, autoimmune.

We describe a case of a woman presenting with right upper quadrant pain who was found to have indirect predominant hyperbilirubinemia and acute cholecystitis and renal mass on ultrasound.

## Introduction

An 81-year-old female presented to an outside hospital for RUQ and epigastric pain that worsened after fatty meals. Initial ultrasound imaging showed acute cholecystitis as well as a right renal mass.

Physical exam at the time was remarkable only for diffuse tenderness to abdominal palpation, most notably in the RUQ. There was no scleral icterus on exam.

Labs on presentation can be seen in Table 1.

## Clinical Course

Given the elevated indirect bilirubin, gastroenterology was consulted and suggested Gilbert syndrome (GS) or SS given their concern for renal cell carcinoma (RCC). The next day the patient underwent a laparoscopic cholecystectomy notable for acute gangrenous cholecystitis with cholelithiasis and had rapid normalization of bilirubin over 48 hours. She then underwent an abdominal CT for further characterization of renal mass (Figure 1) and was discharged with an outpatient Urology appointment.

Outpatient renal biopsy was positive for clear cell RCC. Follow up imaging at 6 months revealed scattered pulmonary nodules up to 1.1cm, concerning for metastasis. Surgery was deemed inappropriate and the patient was conservatively managed, given her wishes to prioritize quality of life and not undergo chemotherapy.



Figure 1. Computed tomography (CT) abdomen and pelvis post-op day 2 after cholecystectomy, notable for right sided renal mass.

## Discussion

This case illustrates an interesting clinical picture where a patient with confirmed cholecystitis also has a new renal mass, with labs and imaging consistent with SS. The diagnosis of SS is made clinically, with resolution of abnormal lab values upon RCC resection. In this case, surgery was not in line with patient wishes, hemolysis was ruled out with relatively stable post-op hemoglobin and normal peripheral smear, and the diagnoses of acute cholecystitis and RCC causing SS was made.

## Conclusions

In addition to hemolysis, GS, and Criggler-Najjar when working up indirect hyperbilirubinemia, it is imperative to include SS on the differential diagnosis.

Table 1. Lab values throughout patient's admission.

	Day of Admission	Post-Op Day 2	Normal
White blood cell count (10 <sup>3</sup> /uL)	17.0	14	4.1-9.3
Hemoglobin (d/dL)	10.6	9.8	11-14.7
Platelet count (10 <sup>3</sup> /uL)	246	248	130-350
Prothrombin time (s)	13.8		9.4-12.9
INR	1.2		0.83-1.14
Albumin (g/dL)	3.3	2.7	3.5-5.2
Total bilirubin (mg/dL)	2.8	0.9	0.1-1.2
Indirect bilirubin (mg/dL)	2.4		0-0.9
Alkaline phosphatase (IU/L)	96	102	30-115
AST (IU/L)	23	20	5-45
ALT (IU/L)	12	16	5-60
Lipase (U/L)	12		11-82

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## References

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