EJCRIM
European Journal
of Case Reports
in Internal Medicine

SEVERE CHOLESTATIC JAUNDICE AS THE INITIAL MANIFESTATION OF RADIOLOGICALLY OCCULT METASTATIC PROSTATE CANCER: AN ICTERIC VARIANT OF STAUFFER SYNDROME

Mariana Santa Barbara Medeiros, Adriana Rassilan Vilanova, Laura Caroline Führ, Maria Luiza Assunção Azevedo

Hospital Luxemburgo, Instituto Mário Penna, Belo Horizonte, Brazil

Corresponding author's e-mail: marimedeiros10@hotmail.com

Received: 09/03/2026
Accepted: 13/04/2026
Published: 10/07/2026

Conflicts of Interests: The Authors declare that there are no competing interests.
Patient Consent: Written informed consent was obtained from the patient for publication of this report.
This article is licensed under a CC Attribution-NonCommercial-NoDerivatives 4.0 License

How to cite this article: Medeiros MSB, Rassilan Vilanova A, Führ LC, Assunção Azevedo ML. Severe cholestatic jaundice as the initial manifestation of radiologically occult metastatic prostate cancer: an icteric variant of Stauffer syndrome. *EJCRIM* 2026;**13**:doi:10.12890/2026_006232

ABSTRACT

Stauffer syndrome is a rare paraneoplastic hepatic dysfunction classically associated with renal cell carcinoma and increasingly recognised in association with other malignancies. The icteric variant, characterised by clinically apparent jaundice and marked hyperbilirubinaemia, is particularly uncommon. We report the case of a 75-year-old man who presented with progressive cholestatic jaundice, with total bilirubin levels peaking at approximately 20 mg/dl. An extensive diagnostic workup including laboratory testing, upper gastrointestinal endoscopy, cross-sectional imaging, magnetic resonance cholangiopancreatography and liver biopsy excluded biliary obstruction, hepatic metastasis and primary hepatobiliary disease. Due to the absence of prostate abnormalities on imaging and lack of lower urinary tract symptoms, prostate cancer was not initially suspected. The diagnosis was ultimately established through biopsy of a splenic lesion, which confirmed metastatic prostate adenocarcinoma on immunohistochemistry. Serum prostate-specific antigen was measured only after histological confirmation and was markedly elevated. Following surgical androgen deprivation therapy, there was rapid and sustained improvement in cholestasis, supporting the diagnosis of icteric Stauffer syndrome secondary to prostate cancer.

KEYWORDS

Stauffer syndrome, paraneoplastic cholestasis, prostate cancer, cholestatic jaundice

LEARNING POINTS

- Severe cholestatic jaundice may represent a paraneoplastic manifestation of occult prostate cancer.
- Normal biliary imaging, negative endoscopic evaluation and non-specific liver biopsy findings should prompt consideration of paraneoplastic cholestasis.
- Rapid biochemical improvement following oncologic treatment strongly supports the diagnosis of Stauffer syndrome.

EFIM
European Federation of Internal Medicine

Publisher
smc media srl

INTRODUCTION

Stauffer syndrome describes a paraneoplastic hepatic dysfunction characterised by cholestatic laboratory abnormalities in the absence of hepatic metastases or biliary obstruction[1-4]. First described in association with renal cell carcinoma, it has since been reported with an expanding spectrum of malignancies[3]. Recent literature has emphasised that Stauffer syndrome is likely underrecognised, particularly when presenting with overt jaundice. Prostate cancer-associated Stauffer syndrome remains rare, and the icteric variant is exceptional[3]. Because its clinical presentation may closely mimic obstructive or infiltrative hepatobiliary disorders, diagnosis is one of exclusion and often requires extensive investigation.

CASE DESCRIPTION

A 75-year-old man presented with a one-week history of progressive jaundice, acholic stools and dark urine. He denied abdominal pain, fever, pruritus, weight loss, recent alcohol consumption, or use of medications, herbal supplements or illicit drugs. His medical history was notable only for a remote exploratory laparotomy following abdominal trauma. On admission, laboratory evaluation revealed marked cholestatic liver enzyme abnormalities, with gamma-glutamyl transferase of 1,651 U/l and alkaline phosphatase of 874 U/l, associated with predominantly conjugated hyperbilirubinaemia. Total bilirubin initially measured 14.82 mg/dl and progressively increased during hospitalisation, peaking at 19.91 mg/dl *(Fig. 1)*. Mild transaminase elevation, hypoalbuminaemia, anaemia and thrombocytopaenia were also present, while coagulation parameters remained relatively preserved.

An extensive aetiological investigation was undertaken. Serological testing excluded acute viral hepatitis, HIV and other relevant infections. Autoimmune markers, metabolic studies and evaluation for cholangiopathies were non-diagnostic. Upper gastrointestinal endoscopy revealed no abnormalities. Repeated contrast-enhanced computed tomography scans of the abdomen and pelvis demonstrated preserved liver morphology, absence of focal hepatic lesions and no intra- or extrahepatic bile duct dilation. Magnetic resonance cholangiopancreatography confirmed the absence of biliary obstruction or strictures. Notably, despite multiple imaging studies no structural abnormalities of the prostate were identified *(Fig. 2)*, and the patient denied lower urinary tract symptoms.

Given the severity and progression of cholestasis, a percutaneous liver biopsy was performed. Histopathological analysis demonstrated preserved hepatic architecture with non-specific cholestatic changes and no evidence of malignancy, bile duct injury or chronic liver disease. During further evaluation, a splenic lesion identified on imaging *(Fig. 3)* was biopsied. Histology revealed a poorly differentiated epithelial malignancy, and immunohistochemical staining confirmed metastatic

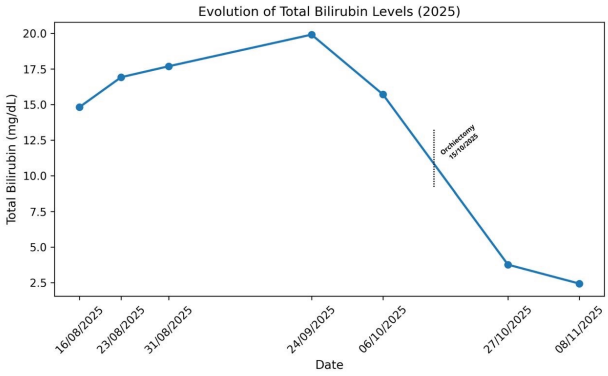


Figure 1. Evolution of total bilirubin levels during hospitalisation, showing progressive increase followed by a marked decline after initiation of androgen deprivation therapy.

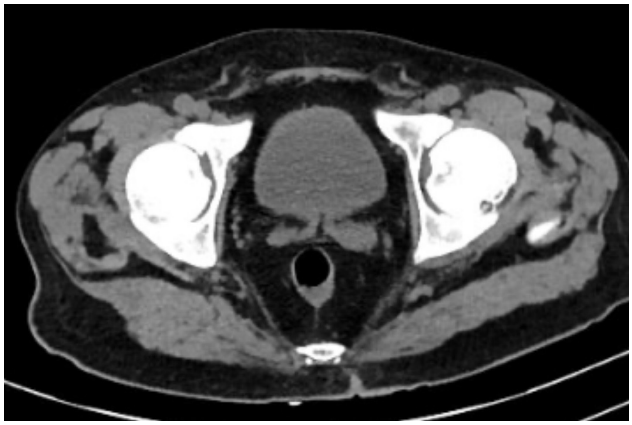


Figure 2. Contrast-enhanced pelvic CT demonstrating no evident prostatic mass or structural abnormality.

prostate adenocarcinoma. Serum prostate-specific antigen was subsequently measured and found to be markedly elevated (>2,100 ng/ml).

Additional magnetic resonance imaging demonstrated atypical osseous lesions *(Fig. 4)*, which were not characteristic of the typical osteoblastic pattern seen in prostate cancer metastases.

The patient underwent surgical androgen deprivation therapy via subcapsular orchiectomy. Following treatment there was a rapid and sustained biochemical response, with total bilirubin decreasing from 19.91 to 3.77 mg/dl within two weeks, accompanied by progressive clinical improvement.

DISCUSSION

This case illustrates a rare and severe icteric presentation of Stauffer syndrome associated with metastatic prostate cancer. While Stauffer syndrome is most commonly linked to renal cell carcinoma, increasing evidence suggests that it may occur in association with a broader range of malignancies[4]. The degree of hyperbilirubinaemia observed in this patient places this case among the most severe icteric presentations reported to date in prostate cancer.

The pathophysiology of Stauffer syndrome remains incompletely understood but is thought to involve cytokine-mediated hepatic dysfunction, particularly interleukin-6-

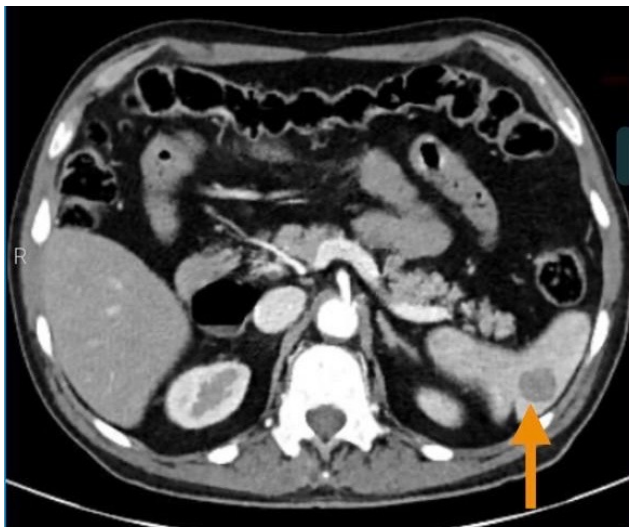


Figure 3. Contrast-enhanced abdominal CT demonstrating a focal splenic lesion (arrow), later confirmed as metastatic prostate adenocarcinoma on histopathological analysis.



Figure 4. Magnetic resonance imaging demonstrating a focal area of altered signal intensity within a vertebral body (arrow), suggestive of atypical bone involvement.

driven inflammatory signalling, leading to impaired bile secretion without structural biliary disease[4,5]. The marked reversibility of cholestasis following androgen deprivation therapy strongly supports a paraneoplastic mechanism in this case.

An important and educational aspect of this report is the diagnostic challenge posed by radiologically occult prostate cancer. In the absence of prostate abnormalities on imaging *(Fig. 2)* and without urinary symptoms, the diagnosis was not initially suspected, and tissue diagnosis was pursued from an atypical metastatic site. This emphasises the importance of maintaining a high index of suspicion for paraneoplastic syndromes in patients with unexplained severe cholestatic jaundice after exclusion of common hepatobiliary aetiologies.

A similar case was reported by Khanal et al.[6], describing Stauffer syndrome in a 72-year-old man presenting with cholestatic jaundice as the initial manifestation of advanced metastatic prostate cancer[6]. In that report, the patient had clear evidence of prostatic involvement, with enlargement detected on clinical examination and imaging, in addition to widespread metastatic disease involving pelvic structures, bones, lymph nodes and the urinary bladder. In contrast, our patient had no radiological evidence of a primary prostatic lesion despite repeated imaging studies, highlighting the diagnostic challenge of radiologically occult disease. Furthermore, while Khanal et al.'s case demonstrated a more typical pattern of metastatic dissemination, our patient presented with metastases in unusual sites, including the spleen *(Fig. 3)*, as well as atypical osseous lesions *(Fig. 4)*, reinforcing the heterogeneity of metastatic presentation in this rare paraneoplastic syndrome. These differences underscore that Stauffer syndrome associated with prostate cancer may occur even in the absence of a detectable primary tumour on imaging and may be associated with atypical metastatic patterns, further complicating and delaying diagnosis.

CONCLUSION

Icteric Stauffer syndrome may represent the initial manifestation of metastatic prostate cancer, even when the primary tumour is clinically and radiologically silent. Recognition of this rare paraneoplastic phenomenon is essential to avoid unnecessary invasive procedures and to allow timely initiation of appropriate oncologic therapy.

REFERENCES

1. Elseidy SA, Awad AK, Mandal D, Elbadawy MA, Iqbal A. Stauffer syndrome: a comprehensive review of the disease and diagnostic plan proposal. *Egypt J Intern Med* 2022;**34**:39. doi: 10.1186/s43162-022-00128-6
2. Chavarriaga J, Fakih N, Cataño J, Villaquiran C, Rodriguez S, Patino G. Stauffer syndrome: clinical implications and knowledge gaps, does size matter? Case report. *BMC Urol* 2020;**20**:105. doi: 10.1186/s12894-020-00671-w
3. Sharma N, Darr U, Darr A, Sood G. Stauffer syndrome: a comprehensive review of the icteric variant of the syndrome. *Cureus* 2019;**11**:e6032. doi: 10.7759/cureus.6032
4. Deliège M, Bastens B, Matus G, Blétard N, Houbiers G, Courtois A, et al. Stauffer syndrome: a rare paraneoplastic complication of renal cell carcinoma be kept in mind. Case report and literature survey. *Acta Gastroenterol Belg* 2024;**87**:40–43. doi: 10.51821/87.1.11402
5. Ravindranathan D, Hitron EE, Russler GA, Xue Y, Bilen MA. Metastatic Prostate Cancer Manifesting as Cholestatic Jaundice: A Case Report and Review of the Literature. *Case Rep Oncol Med* 2018;**2018**:1809432. doi:10.1155/2018/1809432
6. Khanal S, Bhatt T, Atogwe ID, Itare V, Shrestha E, Sulh M. Stauffer syndrome as the initial presentation of advanced metastatic prostate cancer. *Cureus* 2023;**15**:e37663. doi:10.7759/cureus.37663. Erratum in: *Cureus* 2024;16:c194. doi: 10.7759/cureus.c194