

## Oncology

# A patient with obstructive jaundice secondary to intrahepatic bleeding caused by prostate cancer metastasis

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## ABSTRACT

A metastatic disease causes jaundice is not uncommon and usually related to direct tumor invasion to the biliary tree or massive intrahepatic metastasis. Cholestasis secondary to non-traumatic intrahepatic bleeding caused by metastasis from prostate cancer is never been reported in the literature. We present the first case of a 71-years-old patient developed Cholestasis due to spontaneous intrahepatic bleeding caused by metastasis from prostate cancer that was successfully treated conservatively. Prostatic cancer causes liver metastasis carries worse prognosis and compression of the intrahepatic biliary ducts can have long term unsatisfactory outcomes.

## Introduction

It is not unusual for malignant tumors to cause cholestasis as a result of direct infiltration to the biliary ducts or due to extensive hepatic metastasis.<sup>1</sup> Cholestasis also can be seen as paraneoplastic manifestation of variant malignant diseases.<sup>2</sup> On rare occasions, spontaneous rupture of liver metastasis causing

hemoperitoneum is a life-threatening condition and mandate urgent surgical intervention.<sup>2</sup> To the best of our knowledge, Intrahepatic prostate cancer metastasis associated with intraparenchymal hemorrhage causing cholestasis has never been reported. We present a case with Large subcapsular hepatic hemorrhage by prostatic cancer metastasis causing cholestasis that was treated conservatively.

## Case presentation

A 71 years old patient admitted initially to the internal medicine ward with worsening of his general condition, symptoms of malaise and weight loss. He is known to have prostate cancer with bone, liver and left adrenal gland metastasis diagnosed 2008. He received 2 cycles of Docetaxel until 2014 as he was part of the OGX-011-11 study. He is currently under Goserelin and Zoledronic acid therapy. The patient has also AV-Block type III and has Piece-Maker implemented 2014. Examination revealed normal neurological function with a normal gait. Abdominal examination was unremarkable. Digital rectal examination revealed a hard prostate (T3/T4). On admission day his laboratory parameters showed normal renal function, anaemia (Hb 9.3 g/dl), slightly

elevated liver function (bilirubin 1.2 mg/dl, alkaline phosphatase 130 mg/dl, Lipase 29 u/l, gamma-glutamyl transpeptidase 150 u/l, Alanine aminotransferase 80 u/l, Aspartate Aminotransferase 62 u/l) and normal coagulation parameters. One week in his admission the patient started to complain from frequent vomiting and abdominal pain. He became restless, jaundiced, tachycardiac. His blood pressure 100/60 mmhg, and he had tender right upper abdomen. Emergency laboratory workup revealed elevated liver enzymes (bilirubin 3.2 mg/dl, alkaline phosphatase 244 mg/dl, Alanine transaminase 133 u/l, gamma-glutamyl transpeptidase 387 u/l), as well as sudden drop in his hemoglobin to 7 mg/dl. An urgent CT was done that showed 17 cm encapsulated hematoma originated from previously known liver metastasis in segment IV causing compression to the intrahepatic biliary ducts (Fig. 1). After fluid resuscitation and blood transfusion, Endoscopic retrograde cholangiopancreatography (ERCP) was done and it rolled out any compression to the common bile duct and or haemobilia. With the high risks form rupturing of the hematoma the patient is then shifted to the ICU for supportive care and close monitoring. Over the next 2 weeks in the hospital the liver enzymes improved, and his hemoglobin stabilized. The patient was discharged to the out-patient care. Over the next 6 months the hematoma remains constant, the patient and his wife decided for do-not-resuscitate (DNR) and was referred to the palliative care and discontinued his follow-up.

## Discussion

Advance prostatic cancer can present itself in wide range of pictures,

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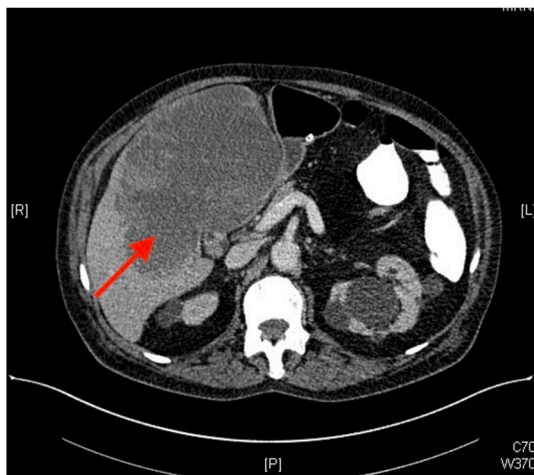
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(a)



(b)

**Fig. 1.** Computed tomography (CT) images show (A) transverse CT image showing a large intrahepatic hematoma (B) coronal CT image showing segment IV liver bleeding causing compression to the intrahepatic biliary ducts.

such as lethargy, anemia, bone pain, urine retention and constipation.<sup>2</sup>

Cholestasis is very rare presenting feature, and the causes in such cases can be due to direct invasion of the tumor or external compression of the biliary tree from lymph node compression or rarely due to a paraneoplastic phenomenon.<sup>3</sup> Moreover, bleeding from malignancies may occur as a complication of either the primary tumor or its metastasis.<sup>4</sup> This is described to be reflecting the tendency of metastatic disease to be more vascular and invasive than the primary liver cancers.<sup>4</sup> In an extensive literature review, multiple reports described metastatic diseases to the liver causes intraperitoneal bleeding.<sup>4,5</sup> Liver dysfunction on the other hand associated with malignant disease is common.<sup>5</sup> The etiology of cholestasis can surely be due to direct invasion or external compression of tumor masses to the biliary tree, or rarely related to paraneoplastic condition.<sup>3</sup> However, obstructive cholestasis as an acute presentation of encapsulated bleeding form metastatic liver mass without evidence of hepatic infiltration has never been reported. We describe the only case to date with an encapsulated intrahepatic bleeding form prostatic cancer metastasis complicated with cholestasis. The significance of this case that it causes compression in the intrahepatic ducts associated with high risk of life-threatening rupture of the hematoma. The management of this condition must be directed to avoid serious complications from the rupture of the hematoma. This report argues that liver dysfunction secondary to intrahepatic biliary ducts compression by hematoma caused by metastatic prostatic disease can be treated conservatively.

### Conclusion

Biliary tree obstruction is an unusual presentation of metastatic carcinoma of the prostate. This can be due to direct invasion of the tumor or external compression from lymph node compression or rarely related to a paraneoplastic phenomenon. Intrahepatic compression form encapsulated bleeding by prostatic cancer metastasis causing cholestasis that we report to the first time can be treated conservatively.

### Declaration of competing interest

The authors declare that they have no competing interests. No benefits in any form have been received or will be received from a commercial party related directly or indirectly to the subject of this article.

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