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# **Vertebral Metastasis in Gallbladder Carcinoma- An Unusual Site**

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## **Abstract**

**Background:** Gallbladder carcinoma spreads commonly by direct invasion. Hematogenous spread to liver, lungs, skin are known but vertebral metastasis has rarely been reported earlier.

**Method:** We are reporting a case of 38 years old male who presented to us with surgical jaundice due to gallbladder carcinoma. Computed tomogram revealed lumbar vertebral metastasis. Patient succumbed to his disease very rapidly.

**Conclusion:** Skeletal metastasis in gallbladder carcinoma is rare but possible in advanced cases.

**Keywords:** Gall bladder carcinoma; metastasis; invasion.

## **Introduction**

Gallbladder carcinoma is one of the commonest malignancies in north India. Direct infiltration into adjacent organs like liver, duodenum, colon etc. is the most common route of spread though lymphatic and hematogenous routes are also known. The most common extra abdominal site of metastasis is lung followed by brain. Skeletal metastasis in gallbladder carcinoma is extremely rare. Only few such case reports are available in English literature showing metastasis to femur or skull bone [1-3]. Vertebral metastasis has rarely been reported earlier. We are reporting a case of locally advanced gallbladder carcinoma with vertebral metastasis as the only site of distant metastasis.

## Case

A 38 years old male presented to surgical out patients department with pain right hypochondrium and progressively increasing jaundice for 1 month. On examination, he was afebrile, cachexic and jaundiced. Abdominal examination revealed hepatomegaly and hard, palpable gallbladder. Rectal examination, cardiovascular and respiratory examinations were normal. There was mild tenderness over L1 and L5 vertebral spines. Sensory and motor examination of the lower limbs was normal. His ECOG performance status was grade 2. Total Bilirubin was 9.6 mg% with alkaline phosphatase 574 IU/L. Sonography and computed tomogram revealed mass in the gallbladder fossa infiltrating into adjacent liver and duodenum with dilated intrahepatic biliary radicals with lytic lesions in L1

and L5 vertebrae (fig 1). CT guided biopsy from these vertebral lesions confirmed metastatic adenocarcinoma (fig. 2). Endoscopic biliary endoprosthesis followed by palliative chemotherapy with carboplatin and gemcitabine was planned but patient deteriorated rapidly. He developed ascites in 2 weeks and died after 4 weeks due to hepatic encephalopathy.

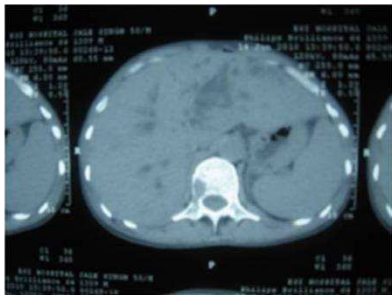
## **Discussion**

Gallbladder carcinoma is a dismal disease in India. Most of the patients present in an advanced stage. It spreads by direct extension and by metastasis. Liver is the most common organ involved by direct extension. Other organs commonly affected by direct extension are stomach, duodenum, bile ducts, colon, omentum and abdominal wall. Metastases go mostly to liver and

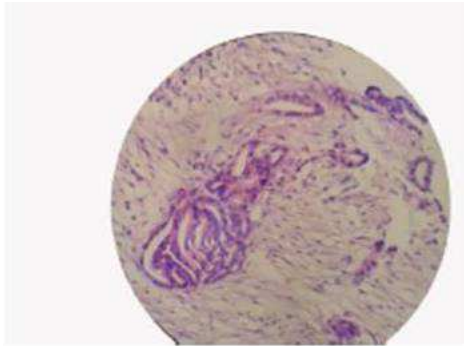
regional lymph nodes. Extra abdominal metastasis involves lung and brain. Rare sites of involvement are orbit [4], breast [5], heart [6] and skin [7]. Skeletal metastasis is extremely rare; only few case reports are available in world literature, 2 showing skull metastasis and 1 showing deposits in femur [1-3]. Two cases have been reported showing spinal and leptomeningeal metastasis from gallbladder carcinoma [8, 9]. Metastasis of gallbladder carcinoma to lumbar vertebrae has been reported only by few authors [10, 11] so we found this case worth reporting. Vertebral involvement was the only site of distant metastasis in our case which precluded definitive surgery. The case reported here highlights the role of CT in accurately staging gallbladder carcinoma.



## Legend



**Figure 1: Computed Tomogram Showing Dilated Intrahepatic Biliary Radicals with Lytic Lesion in Lumbar Vertebrae.**



**Figure 2: CT Guided Biopsy Showing Features of Metastatic Adenocarcinoma**

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