

## Fulminant Malignant Hepatic Failure

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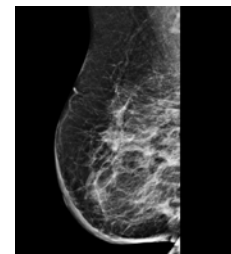
### Abstract

We present a patient that developed abdominal pain, jaundice and confusion leading to a diagnosis of metastatic disease to the liver. Our case is a reminder of the possibility of malignancy in the differential diagnosis of fulminant liver failure. The liver is a common destination for metastatic malignant spread nevertheless, metastatic fulminant liver failure is a rare occurrence and when it develops is usually hematological in nature. Prognosis has remained poor over the last decades as most patients have a fatal outcome within days after their admission to the hospital for work-up of hyperbilirubinemia. Malignant hepatic infiltration should be considered in the differential diagnosis of acute progressive liver failure.

**Keywords:** Fulminant; Liver failure; Metastatic; Breast cancer

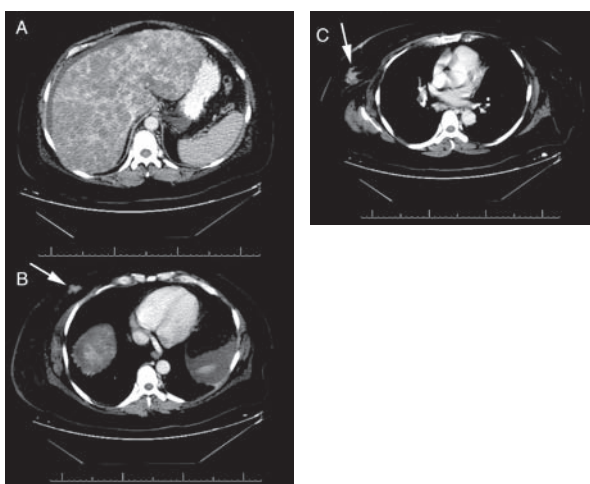
### Fulminant Malignant Hepatic Failure

A 51-year-old female presented with abdominal pain and confusion of one week duration. Physical exam showed jaundice and asterixis. The patient was alert and awake; nevertheless the patient was forgetful and disoriented to time and place. Laboratory studies showed a 15-fold increase in transaminases and bilirubin, increased alkaline phosphatase and prolonged INR at 2.16. Serological markers of acute hepatitis virus, autoimmune workup and copper metabolism were normal or negative, and the patient denied previous ingestion of drugs or plants. Computed Tomography (CT) of the abdomen (Figure 1 Panel A) showed numerous poorly defined liver masses without portal vein thrombosis. Incidentally, imaging revealed a right breast mass (Figure 1 Panel B) with irregular nodularity on her axillae (Figure 1 Panel C). Head CT scan of the head with and without contrast did not reveal any acute abnormalities. Tumor markers usually associated with breast cancer were remarkably elevated with CA15-3 at 8,072.3 U/mL (NV<32.4) and CA27-29 at 8,023 U/mL (NV<38.6). CT-guided liver biopsy revealed a poorly differentiated adenocarcinoma replacing most of the hepatic parenchyma. A mammogram (Figure 2) confirmed



**Figure 2:** Mammogram confirmed a 3 cm solid mass with pleomorphic calcifications in the right outer breast quadrant.

a 3cm solid mass with pleomorphic calcifications in the right upper-outer breast quadrant although the patient quickly developed multiorgan failure with a fatal outcome prior to further diagnostic or therapeutic interventions. The patient died seven days after her admission to the hospital for work-up of hyperbilirubinemia. Our case is a reminder of the possibility of malignancy in the differential diagnoses of fulminant liver failure. The liver is a common destination for metastatic malignant spread nevertheless, metastatic fulminant liver failure is a rare occurrence and when it occurs is usually hematological in nature [1-3]. Escorsell et al. [3] reported a malignant etiology in 8 out of 267 (3%) patients with acute liver failure. Similarly, Rowbotham et al. [4] reported malignant hepatic infiltration in 18 patients out of 4020 admissions (0.44%) with acute liver failure. The same group reported a hematologic etiology (non-Hodgkin's lymphoma, Hodgkin's lymphoma and haemophagocytosis) as the most common culprit; whereas an infiltrative metastatic carcinoma was identified in four patients [4]. Other solid malignancies that have been reported to present with fulminant malignant hepatic failure secondary include metastatic small-cell lung carcinoma, melanoma and breast cancer [5-



**Figure 1:** Computed tomography (CT) of the abdomen (Panel A) showed numerous poorly defined liver masses without portal vein thrombosis. Incidentally, imaging revealed a right breast mass (Panel B) with irregular nodularity on her axillae (Panel C).

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7]. Prognosis has remained poor over the last 2 decades as most patients have a fatal outcome within days after their admission [8]. Malignant hepatic infiltration should be considered in the differential diagnosis of acute progressive liver failure [9].

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