

# Primary squamous cell carcinoma of liver presenting as evolving liver abscess

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## Abstract

Squamous cell carcinoma usually arises from the skin, head and neck region, cervix, and anal canal. 4-5% of carcinoma of unknown primary are found to be squamous cell carcinoma. Patients with primary squamous cell carcinoma of liver generally present with abdominal pain, jaundice, weight loss, loss of appetite, and rarely progressive dysphagia. Physical examination may reveal a palpable liver mass. A 60-year-old female patient presented with complaints of pain abdomen in the epigastrium and right upper quadrant associated with fever. There was no history of nausea, vomiting, anorexia, abdominal distension, diarrhea, or jaundice. The present case describes a case of primary squamous cell carcinoma of the liver presenting as liver abscess successfully treated by surgical resection. The post-operative period patient developed subacute intestinal obstruction for which diagnostic laparoscopy and adhesiolysis was done. Six months follow up patient is disease-free.

**Keywords:** Squamous cell carcinoma, Metastatic squamous cell carcinoma, Intrahepatic calculi, Hepatic cirrhosis, Carolis disease

## Introduction

Squamous cell carcinoma usually arises from the skin, head and neck region, cervix, and anal canal. 4-5% of carcinoma of unknown primary are found to be squamous cell carcinoma. Persistent irritation due to chronic inflammation leads to secondary squamous metaplasia and malignant transformation.

Since primary hepatic squamous cell carcinoma is rare, always consider metastatic squamous cell carcinoma and rule out primary from other sites before labeling a case as primary hepatic squamous cell carcinoma. Primary squamous cell carcinoma is associated with a congenital cyst of liver, intrahepatic calculi, hepatic cirrhosis, and Caroli disease. Chronic inflammation of the bile duct or congenital cysts of liver or intrahepatic calculi is the major etiologic factor [1-7].

Patients with primary squamous cell carcinoma of liver generally present with abdominal pain, jaundice, weight loss, loss of appetite, and rarely progressive dysphagia. Physical examination may reveal a palpable liver mass. In this case, the patient presented with pain abdomen in the right upper quadrant and epigastrium with a necrotic mass

in the liver which was suspected to be evolving abscess which correlates with abscess formation and secondary malignant transformation. Since primary squamous cell carcinoma of the liver is aggressive overall survival is less than one year. This report presents a primary squamous cell carcinoma of liver presenting as liver abscess.

## Case Report

A 60-year-old female patient presented with complaints of pain abdomen in the epigastrium and right upper quadrant associated with fever. There was no history of nausea, vomiting, anorexia, abdominal distension, diarrhea, or jaundice.

**Course in hospital-** CT scan is done elsewhere showed an evolving liver abscess. Hence patient was managed conservatively with antibiotics. Since the patient's condition was not improving she was referred to our hospital. Hence IHC was reported as poorly differentiated carcinoma with squamoid features consistent with squamous cell carcinoma. Since primary squamous cell carcinoma of the liver is rare, a blind biopsy from the oral cavity was done which was all negative for malignancy. Hence working diagnosis of primary hepatic squamous cell carcinoma was made.

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**Investigations** Tumor markers were done. Ca125- 91.6 U/ml(0-35), AFP-22.8ng/ml(<10), CA 19.9- 23.39 U/ml(0-37), CEA- 0.7ng/ml(<3), chromogranin A- 213ng/ml(<39).A trucut liver biopsy was done. Microscopically the tumor cells were round to polygonal with pleomorphic hyperchromatic nuclei .Hence a diagnosis of poorly differentiated malignant neoplasm was made. IHC was done which showed neoplastic cells positive for P-40, CK-7 and negative for Hepar-1, glypican-3, CK-20, CDX-2 and TTF-1.

**Treatment** Laparoscopic right hepatectomy was done which also showed poorly differentiated squamous cell carcinoma. IHC results were similar to the previous trust biopsy report.

**Postoperative course:** primary squamous cell carcinoma of the liver presenting as liver abscess successfully treated by surgical resection. The postoperative period patient developed subacute intestinal obstruction for which diagnostic laparoscopy and adhesiolysis was done. Six months followup patient is disease-free.

## Discussion

Tsuneyama et al suggest that squamous metaplasia arises from adenocarcinoma and has the potential to differentiate into a variety of cell types and liver squamous cell carcinoma can occur from one such adenocarcinoma. Gresham GA presented a case of squamous cell carcinoma arising in a hepatic cyst is presented. The neoplasm probably originated in a developmental cyst. Four other cases that were reported previously are reviewed, together with accounts of adenocarcinomas arising in hepatic cysts [4,5].

Yagi H et al presented a rare case of squamous cell carcinoma of the liver originating from non-parasitic cysts after a 15-year follow-up. Ultrasonography showed four cystic masses in the liver with a maximum diameter of 15 cm, one of which contained a solid component. A computed tomography (CT) scan confirmed a huge, predominantly cystic, mass in the liver with a small solid component and irregular wall. Calcifications were seen in the solid components.A laparotomy was performed but the masses were too large to be removed.

During 15 years of follow-up after the laparotomy, there had been no change seen in his abdominal CT scan. A CT scan showed a cyst in the liver of 25 cm in diameter with calcification that had a large solid part invading the liver. A post-mortem pathological dissection showed multiple cysts, the largest of which was 25 cm in diameter. They had large solid parts with calcification invading the liver. There were widespread metastatic lesions. Microscopic

examination showed the tumor to be a well-differentiated squamous cell carcinoma. To the best of our knowledge, this is the first report of a squamous cell carcinoma arising from 15 multiple non-parasitic hepatic cysts after a 15-year follow-up. Furthermore, 23 years had passed since the patient's symptoms appeared for the first time [6].

Nieweg O et al also presented with the case of primary squamous cell carcinoma of the liver arising in a solitary cyst.A review of the literature suggests that this rare type of liver tumor tends to arise from solitary, nonparasitic cysts, lined with squamous epithelium. Effective therapy is not available, the prognosis is grave [7].

Song E et al studied primary squamous cell carcinoma of the liver occurring in association with hepatolithiasis. Primary squamous cell carcinoma of the liver has previously been reported to arise only from the lining of a developmental hepatic cyst or in a hepatic teratoma. The authors describe the occurrence of such a tumor in association with multiple intrahepatic cholesterol gallstones. It is suggested that the gallstones may have caused squamous metaplasia of the lining of the bile ducts and that this in turn was responsible for squamous carcinoma formation [8].

Shinagawa T et al presented a case report on primary squamous cell carcinoma of the liver.

Cytology via PTCD from a cystically dilated duct in a 56-year-old female with a long clinical history permitted the diagnosis of squamous cell carcinoma (SCC). The smears showed excessive benign-appearing squamous cells with or without a nucleus and a few keratinized- and nonkeratinized-type SCC cells.

No adenocarcinoma-derived cells were identified.This case of cytology of primary SCC of the liver seems to be the first reported. Even when showing a great number of benign-appearing squamous cells, the possibility of malignancy should not be ruled out. Repeating the cytology from PTCD is effective for diagnosis [9].

Pawlik TM et al did liver-directed surgery for metastatic squamous cell carcinoma to the liver: results of a multi-center analysis. The role of hepatic resection for metastatic squamous cell carcinoma (SCC) remains unknown. The current study evaluates the role of hepatic resection in patients with metastatic SCC to the liver.The majority of patients will recur following hepatic resection of SCC.

Long-term survival, however, can be achieved following surgical resection of SCC liver metastasis, especially in patients who present with limited metachronous disease amenable to margin negative resection [10].

Lee HL et al presented a successful surgically treated case of primary squamous cell carcinoma of the liver. Primary squamous cell carcinoma (SCC) of the liver is rare. Totally nine such cases have been reported in the literature. The primary SCC of the liver has been reported to be associated with hepatic teratoma, hepatic cyst, or hepatolithiasis. Complete remission of poorly differentiated SCC of the liver could be achieved by systemic chemotherapy followed by surgery or remarkably respond to hepatic arterial injection of low dose chemotherapeutic drugs.

Here authors report the first case of primary SCC of the liver presenting as a solid tumor and receiving successful hepatic resection with 9-months of disease-free survival. Xu- Feng Zhang et al study showed patients undergoing radical surgery had longer overall survival time than those undergoing palliative treatment [11,12].

Various treatment options are available which includes surgical resection which has a good prognosis if the tumor is confined to the liver. Chemotherapy, radiotherapy, and transarterial chemoembolization can be used in inoperable patients or as adjuvant therapy before and after surgery. Intrahepatic arterial injection with CDDP (cis-diamine-dichloroplatinum) and 5FU (5-fluorouracil) has a good response [12-14].

Naik S et al studied primary squamous cell carcinoma of the liver. Similar studies were done by Theodosopoulos TK who presented a case report and a brief review of the literature that aggressive treatment of metastatic squamous cell carcinoma of the rectum extended to the liver. Although the prognosis of rectal SCC is worse than that of adenocarcinoma, an aggressive therapeutic approach with surgery as the primary treatment, followed by combined neo- and adjuvant chemo-radiotherapy, may be necessary in order to improve survival and prognosis [15,16].

## Conclusion

In summary, we describe a case of primary squamous cell carcinoma of the liver presenting as liver abscess successfully treated by surgical resection. The postoperative period patient developed subacute intestinal obstruction for which diagnostic laparoscopy and adhesiolysis was done. Six months followup patient is disease-free. Further studies are needed to identify the etiopathogenesis of primary hepatic squamous cell carcinoma.

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