

MIXED FIBROLAMELLAR HEPATOCELLULAR CARCINOMA

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Abstract

Mixed fibrolamellar hepatocellular carcinoma is a rare liver tumor defined by the presence of both pure fibrolamellar hepatocellular carcinoma and conventional hepatocellular components. It represents up to 25% of cases of fibrolamellar hepatocellular carcinoma, and has been associated with a worse prognosis.

MIXED FIBROLAMELLAR HEPATOCELLULAR CARCINOMA

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Keywords : Pathology, liver, tumor, mixed fibrolamellar hepatocellular carcinoma

Key Clinical Message:

Pure and mixed fibrolamellar hepatocellular carcinomas display distinct clinical presentations and epigenetic backgrounds leading to different prognoses and as such may be regarded as separate clinical entities.

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ABSTRACT:

Mixed fibrolamellar hepatocellular carcinoma is a rare liver tumor defined by the presence of both pure fibrolamellar hepatocellular carcinoma and conventional hepatocellular components [1]. It represents up to 25% of cases of fibrolamellar hepatocellular carcinoma, and has been associated with a worse prognosis [2].

CLINICAL IMAGE

A 22-year-old previously healthy female patient, presented with an abdominal discomfort for the past two months. The physical examination revealed a firm nodular mass in the right flank. The serum alpha-fetoprotein level was equal to 1.48 ng/l (normal <3 ng/l). Nonenhanced CT scan disclosed a hypodense well-defined liver mass in the right hepatic lobe. During the arterial phase of dynamic enhanced CT, the tumor showed prominent and heterogeneous enhancement with a more central portion remaining hypodense

(central scar) (Figure A). A liver biopsy was performed and histopathological examination established the diagnosis of hepatocellular carcinoma. The patient underwent liver resection. Grossly the tumor was well-delineated and lobulated with a central fibrous scar (Figure B). Histological examination of the surgical specimen showed a biphasic tumor proliferation of large cells containing large nuclei with abundant and eosinophilic cytoplasm. The tumor cells were arranged in a trabecular pattern and were segregated by deposition of fibrous connective tissue, with lamellae formation (Figure C). The second compartment of the tumor was consistent with steatohepatic hepatocellular carcinoma (Figure D). The tumor cells in this compartment showed macrovesicular steatosis, lymphocytic inflammation, balloon cells, and pericellular fibrosis. Postoperative course was uneventful and the patient is still being followed-up.

CONFLICT OF INTEREST STATEMENT

None declared.

AUTHORS CONTRIBUTIONS

Dr Faten LIMAIE prepared, organized, wrote the manuscript. She performed the gross and microscopic pathologic evaluation of the pathology specimen. She prepared all of the histology figures in the manuscript. She read, edited, and approved the final version of the manuscript. Pr Saadia BOURAOUI edited the article and revised it critically for important intellectual content.

ETHICAL APPROVAL

All procedures performed were in accordance with the ethical standards. The examination was made in accordance with the approved principles.

ACKNOWLEDGEMENT STATEMENT

I would like to offer my special thanks to Mrs Saïda Jerbi who prepared the microscopic slides. Published with written consent of the patient.

DATA AVAILABILITY

In accordance with the DFG Guidelines on the Handling of Research Data, we will make all data available upon request.

REFERENCES

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FIGURE LEGENDS

MULTIPANEL FIGURE:

Figure 1A: Computed tomography scan showing a hypodense hepatic tumor with well-defined lobulated margins. During the arterial phase of dynamic enhanced CT, the tumor showed prominent and heterogeneous enhancement with a more central portion remaining hypodense (central scar: asterisk).

Figure 1B: Gross photograph of mixed fibrolamellar hepatocellular carcinoma forming a multinodular mass with a central scar (black arrow).

Figure 1C: Trabecula of neoplastic cells with abundant oncocyctic cytoplasm in a background of dense collagen bundles arranged in parallel lamellae, (Hematoxylin and eosin, $\times 200$).

Figure 1D: Steatohepatic hepatocellular carcinoma. The tumor cells in this variant show steatohepatitis with macrovesicular steatosis, lymphocytic inflammation, balloon cells, and pericellular fibrosis. (Hematoxylin and eosin, $\times 200$).

