

Overview and clinical course

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Lecture : Introduction

Hepatocellular carcinoma is one of the most common types of cancer in the world. Spontaneous rupture of HCC occasionally occurs, and ruptured HCC with intraperitoneal hemorrhage is potentially fatal. Various methods for managing ruptured HCC have been proposed. The outcomes of ruptured HCC are poor.

Incidence

There are distinct geographic variations in the reported incidences of spontaneous ruptured HCC. In the West, the incidence of HCC is increasing, but ruptured HCC is relatively uncommon, with an incidence of less than 3%. In Asia, however, the incidence is considerably high, ranging 2.3–26%.

Pathogenesis

The mechanism of spontaneous ruptured HCC has not been fully elucidated. Maybe, rapid growth of the tumor and necrosis are associated with increased intratumoral pressure caused by progressive or sudden occlusion of branches of hepatic veins due to tumor invasion. This in turn causes venous congestion within the tumor in conjunction with factors such as central tumor necrosis and coagulopathy. Vascular dysfunction caused by the degeneration of elastin and the degradation of type IV collagen can render blood vessels stiff and weak. These factors can subsequently lead to bleeding and rupture.

Clinical manifestations

The most common symptom of ruptured HCC is acute abdominal pain (66–100%). Shock is present in 33–90% of patients. Computed tomography is a useful technique for detecting HCC, defining the numbers, sizes and locations of tumors, determining the presence or absence of tumor bleeding, and serially following up changes in hematoma density. Hemoperitoneum and surrounding hematoma are most evident on non-enhanced CT.

Survival

Ruptured HCC is associated with a high in-hospital mortality rate ranging 25–100%. Liver failure occurs in 12–42% of patients during the acute phase.

References

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