**Interactive case insights using multiple choice questions (MCQs)**

**Q1: A 46 years old Bangladeshi gentleman with past medical history of hepatitis C and hepatocellular carcinoma (HCC) presented to hospital complaining of new onset sever/diffused abdominal pain from 3 hours. On clinical examination he is afebrile with GCS of 15/15. He is hypotensive with blood pressure of 90/60mmhg and having tachycardia with heart rate of 122/min, respiratory rate of 28/min and maintaining normal oxygen (O2) saturation at room air. Bedside abdominal US reveals large ascites. Paracentesis reveals high pressure hemorrhagic fluid out of the draining catheter. What could be the possible cause of his clinical presentation?**

1. Spontaneous rupture of hepatic tumor in a patient with metastatic HCC
2. Spontaneous bacterial peritonitis
3. Acute intestinal obstruction due to tumor progression.

**Correct Answer: A**

**Explanation:**

Spontaneous rupture of hepatic tumor is a rare complication of HCC that is usually presented with new onset, severe abdominal pain, signs/symptoms of shock and hemoperitoneum. Chronic hepatitis C usually progress and is associated with vague symptoms of fatigue, nausea, vomiting, diarrhea and muscle pain [1]. Progression of HCC is usually associated with milder abdominal pain and weight loss in absence of signs/symptoms of shock and therefore such life threatening conditions of liver tumor rupture can easily be missed in the early phase[2].

**Q2: Which of the following options could be considered as the best diagnostic modality in a patient with spontaneous rupture of hepatic tumors admitted to emergency department?**

1. Exploratory laparotomy
2. CT abdomen
3. Conventional angiography

**Correct Answer: B**

**Justification:**

Diagnosis of rupture of HCC is possible in 86% by paracentesis, 66% by ultrasonography, 100% by computed tomography and only in 20% by conventional angiography [3].

**Q3: which of the following can be considered as the initial emergency management of hemodynamically unstable patient presented with ruptured hepatic tumor:**

1. Trans-arterial Embolization (TAE)
2. Hepatic resection
3. Conservative management

**Correct Answer: A**

**Justification:**

Trans-arterial Embolization (TAE) is the least invasive procedure preferred in hemodynamically unstable patients whose initial surgical intervention is challenging and associated with a high success rate of up to 100% and reduced 30 days mortality rate [4] as seen in our patient as well.

**References:**

[1] Evon, D., Stewart, P., Amador, J., Serper, M., Lok, A., Sterling, R., Sarkar, S., Golin, C., Reeve, B., Nelson, D., Reau, N., Lim, J., Reddy, K., Di Bisceglie, A. and Fried, M., 2018. A comprehensive assessment of patient reported symptom burden, medical comorbidities, and functional well-being in patients initiating direct acting antiviral therapy for chronic hepatitis C: Results from a large US multi-center observational study. PLOS ONE, 13(8), p.e0196908.

[2] Bialecki, E. and Di Bisceglie, A., 2005. Diagnosis of hepatocellular carcinoma. HPB, 7(1), pp.26-34.

[3] Zhu LX, Wang GS, Fan ST. Spontaneous rupture of hepatocellular carcinoma. Br J Surg. 1996;83:602–607.

[4] Sahu SK, Chawla YK, Dhiman RK, Singh V, Duseja A, Taneja S, et al. Rupture of Hepatocellular Carcinoma: A review of literature. J. Clin. Exp. Hepatol. 2019;9(2):245–56.