Recent Onset Dyspnea in a Patient with Cirrhosis of Liver

Manraj S Anand*, Ajay Bahl**, Vijay Bodh*, Radha K Dhiman*

Departments of *Hepatology and **Cardiology, Postgraduate Institute of Medical Education and Research, Chandigarh – 160012, India

A 35-year-old male patient presented with hematemesis and melena requiring blood transfusion 4 years ago. Gastroscopy revealed grade 4 esophageal varices. He underwent endoscopic variceal ligation and his varices were eradicated in three sessions. Subsequent investigations revealed that he was suffering from hepatitis B virus related cirrhosis of liver. Since then he was receiving anti-virals for chronic hepatitis B (adefovir 10 mg/day) and prophylaxis for secondary variceal bleeding (propranolol 80 mg/day).

He complained of recent onset of dyspnea for 3 months. Physical examination revealed grade 4 digital clubbing

(increase in pulp tissue drumstick or parrot beak) (Figure 1).

Further investigations revealed a partial pressure of arterial oxygen (PaO_2) of 70 mmHg in supine position and 62 mmHg in upright position. Transthoracic two-dimensional contrast-enhanced echocardiography (CEE) (agitated saline to produce microbubbles $>10\text{ }\mu\text{m}$ in diameter) revealed the appearance of microbubbles in the left cardiac chambers (left atrium and left ventricle) 4 heartbeats after the injection of microbubbles (Figure 2), indicating a right-to-left extracardiac shunt, without patent foramen ovale.

What is the diagnosis?

Figure 1 Grade 4 digital clubbing.

Figure 2 Contrast-enhanced echocardiography showing the appearance of microbubbles in the left cardiac chambers (left atrium and left ventricle) 4 heartbeats after the injection of microbubbles.

(Answer on page 218)

Keywords: Cirrhosis, clubbing, echocardiography, hepatopulmonary syndrome, hypoxemia, portal hypertension

Received: 08.12.2011; **Accepted:** 13.12.2011

Address for correspondence: Radha K Dhiman, Professor, Department of Hepatology, Postgraduate Institute of Medical Education and Research, Chandigarh – 160012, India

E-mail: rkpsdhiman@hotmail.com

Abbreviations: CEE: contrast-enhanced transthoracic echocardiography; HPS: hepatopulmonary syndrome; $^{99\text{m}}\text{TcMAA}$: $^{99\text{m}}\text{Technetium}$ -labeled macroaggregated albumin

doi: 10.1016/S0973-6883(11)60241-7