



## Q: How often should patients with hepatitis C be screened for esophageal varices?

### CHRISTOPHER ENTWISLE, MD

Division of Gastroenterology and Liver Diseases,  
George Washington University; Center for Liver Diseases,  
Inova Fairfax Hospital, Falls Church, VA

### ZOBAIR M. YOUNOSSEI, MD, MPH

Director, Center for Liver Diseases, Medical Director, Liver  
Transplant Program, and Medical Director, Inova Research  
Center, Inova Fairfax Hospital, Falls Church, VA

**A:** Patients with hepatitis C should be initially evaluated for cirrhosis: if it is not present, there is no need to screen for esophageal varices. A patient with cirrhosis should be screened promptly with upper endoscopy. If no varices are found, endoscopy should be repeated every 2 years. The finding of small varices requires repeat endoscopy annually.<sup>1</sup>

#### ■ HEPATITIS C INFECTION AND CIRRHOSIS

Millions of Americans are chronically infected with the hepatitis C virus, a disease associated with significant morbidity and mortality. Natural history studies suggest hepatitis C infection progresses to cirrhosis in 20% of cases,<sup>2</sup> making it the most common cause of cirrhosis in the United States.

Cirrhosis almost unavoidably leads to the potentially devastating complications of portal hypertension, which include ascites, hepatic encephalopathy, and the formation of esophageal varices.

#### ■ VARICES CAN DEVELOP RAPIDLY AND BE DANGEROUS

Cirrhosis caused by any chronic liver disease is the main cause of varices related to portal hypertension. Bleeding from varices is the most common cause of death from cirrhosis (> 30% of deaths). Large esophageal varices should be identified as early as possible so that primary prophylactic strategies can be offered.


Patients with cirrhosis have a 50% chance of having varices at the time of diagnosis. Those with no varices on initial endoscopy develop them at a rate of 5% to 20% annually. For those found to have small varices on endoscopy, about 5% to 15% progress to having large varices each year.<sup>3</sup>

The risk of hemorrhage increases with the size of varices, as well as the severity of hepatic dysfunction as determined by the Child-Pugh classification.

Merkel et al,<sup>4</sup> in a randomized, placebo-controlled study in 161 patients with cirrhosis and small esophageal varices, found that the nonselective beta-blocker nadolol inhibited the growth of esophageal varices and reduced the risk of bleeding. These findings should be confirmed in large trials. Nevertheless, nonselective beta-blockers are the preferred treatment for patients with medium-sized or large varices that have not yet bled.

#### ■ ENDOSCOPY IS STILL THE BEST TEST

Endoscopy is the standard screening test for identifying varices. A less-invasive method would be preferable: several studies have looked for potential noninvasive markers, including low blood platelet counts, dilated portal veins as seen on ultrasonography, low blood albumin levels, the presence of telangiectasias, and increased spleen size.<sup>5,6</sup> Although several independent predictors have been identified, no algorithm has been developed to more narrowly select patients for endoscopic testing.

New technology, such as wireless capsule endoscopy, and other less-invasive methods have shown promise in identifying esophageal varices, but their role remains unproven. 

**If no varices are present, repeat endoscopy every 2 years**



## REFERENCES

1. **de Franchis R.** Updating consensus in portal hypertension: report of the Baveno III consensus workshop on definitions, methodology and therapeutic strategies in portal hypertension. *J Hepatol* 2000; 33:846–852.
2. **Liang TJ, Rehermann B, Seeff LB, Hoofnagle JH.** Pathogenesis, natural history, treatment, and prevention of hepatitis C. *Ann Intern Med* 2000; 132:296–305.
3. **Garcia N Jr, Sanyal AJ.** Portal hypertension. *Clin Liver Dis* 2001; 5:509–540.
4. **Merkel C, Marin R, Angeli P, et al; Gruppo Triveneto per l'Ipertensione Portale.** A placebo-controlled clinical trial of nadolol in the prophylaxis of growth of small esophageal varices in cirrhosis. *Gastroenterology* 2004; 127:476–484.
5. **Madhotra R, Mulcahy HE, Willner I, Reuben A.** Prediction of esophageal varices in patients with cirrhosis. *J Clin Gastroenterol* 2002; 34:81–85.
6. **Garcia-Tsao G, Escorsell A, Zakko W, et al.** Predicting the presence of significant portal hypertension and varices in compensated cirrhotic patients [abstract]. *Hepatology* 1997; 26:360A.

ADDRESS: Zobair M. Younossi, MD, MPH, Center for Liver Diseases, Inova Fairfax Hospital, 3300 Gallows Road, Falls Church, VA 22042; e-mail zobair.younossi@inova.com.



**Cleveland Clinic**

*In conjunction with the Society of Perioperative Assessment and Quality Improvement*

2nd Annual

## PERIOPERATIVE MEDICINE SUMMIT

*Using Evidence to Improve Quality, Safety and Patient Outcomes*

September 18-19, 2006

*InterContinental Hotel & MENA Conference Center  
Cleveland, Ohio*

### Target Audience

Internists, hospitalists, family practitioners, anesthesiologists, physician assistants and allied health professionals

### Objectives

At the completion of this summit, the attendee will be able to:

- Outline the different elements of the preoperative evaluation and the communication techniques for the medical consultant
- Appreciate disease processes relevant to perioperative care
- Assess perioperative risk using the history, physical exam, and well-developed evidence-based clinical prediction rules and guidelines for cardiovascular disease, pulmonary disease, thromboembolism, and delirium
- Implement evidence-based therapies for perioperative risk reduction
- Integrate cost-effective preoperative testing in ambulatory and hospitalized patients
- Manage common postoperative medical complications
- Incorporate the latest findings from perioperative clinical research into their office and hospital practice

**Register Today!**

This activity has been approved for AMA PRA Category 17.75 Credit(s)<sup>™</sup>.

[www.clevelandclinicmeded.com/perioperative06](http://www.clevelandclinicmeded.com/perioperative06)