FOREWORD

Portal hypertension is often associated with chronic liver diseases. This is an increase of the blood pressure in the portal vein, caused by resistance in the liver often due to scarring or cirrhosis. Portal hypertension might lead to severe life threatening complications of cirrhosis such as variceal bleeding and hepatic encephalopathy. Therefore development of accurate diagnostic tools is becoming of increasing importance to ensure optimal patient follow up and to prevent major clinical outcomes.

CONTEXT

The aim of the BAVENO consensus meeting (supported by EASL) was, among others, to review the usefulness of diagnostic methods available for screening, surveillance of portal hypertension and gastroesophageal varices.

Authors were a panel of international clinicians experts in the field of end stage liver diseases and in the follow up of cirrhotic patients (Professors Sarin, Pinzani, Burroughs, de Franchis, Reiberger, Castera...)

KEY MESSAGES

FibroScan VCTE is listed in the guideline in the following sections:

1. Definition of compensated advanced chronic liver disease (cACLD)

“The introduction of transient elastography (TE) in clinical practice has allowed the early identification of patients with chronic liver disease (CLD) at risk of developing clinically significant portal hypertension (CSPH)”

For these patients, the alternative term “compensated advanced chronic liver disease (cACLD)” has been proposed to better reflect that the spectrum of severe fibrosis and cirrhosis is a continuum in asymptomatic patients […]”

2. Suspicion of advanced chronic liver disease

“Liver stiffness by TE is sufficient to suspect cACLD in asymptomatic subjects with known causes of CLD”

“TE often has false positive results; hence two measurements on different days are recommended in fasting conditions”

“TE values <10 kPa in the absence of other known clinical signs rule out cACLD; values between 10 and 15 kPa are suggestive of cACLD but need further test for confirmation; values >15 kPa are highly suggestive of cACLD”

Internal comments:

- FibroScan VCTE has become the “standard” noninvasive method to better diagnose chronic advanced liver disease, with recommended diagnostic cut-offs in kPa.
- Two consecutive examinations are recommended in case of technical operator mistake leading to potential stiffness overestimates.

3. Diagnosis of Clinically Significant Portal Hypertension (CSPH) in patients with compensated advanced Liver Disease (cALD)

“In patients with virus related cACLD non-invasive methods are sufficient to rule-in CSPH:”

“Liver stiffness by TE (≥20–25 kPa, with at least two measurements on different days in fasting condition; caution should be paid to flares of ALT, alone or combined to platelets and spleen size.”
4. Identification of patients with cACLD who can safely avoid screening endoscopy

- “Patients with a liver stiffness <20 kPa and with a platelet count >150,000 have a very low risk of having varices requiring treatment, and can avoid screening endoscopy.”
- These patients can be followed up by yearly repetition of TE and platelet count.
- If liver stiffness increases or platelet count declines, these patients should undergo screening esophagogastroduodenoscopy.

**Internal comments:**

- FibroScan VCTE is the only noninvasive technique recommended to diagnose portal hypertension and to better select patients needing endoscopy. Combined diagnostic approach with kPa values and platelet count allows cost saving by reducing the number of endoscopies.
- Most of the papers published on the usefulness of VCTE for diagnosing portal hypertension were performed on chronic viral hepatitis cohorts. More clinical data will be needed to validate its usefulness in non-viral related cirrhotic patients.

**CONCLUSIONS**

These guidelines are very positive for Transient Elastography which is the only noninvasive technique recommended to diagnose and monitor portal hypertension in advanced liver disease, with well-defined cut-offs in kPa. It shall also be pointed out that no other imaging manufacturer developing shear wave based elastography technologies (Siemens, SSI, GE, Toshiba, Philips...) are listed in this guideline, and that the cut-offs provided in kPa are valid for Transient Elastography only.