

Multicenter Validation of the EVendo Score for Noninvasive Risk Stratification of Patients with Cirrhosis Undergoing Endoscopic Variceal Surveillance



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Introduction

Patients with cirrhosis often undergo repeat esophagogastroduodenoscopy (EGD) for variceal surveillance even when there are no varices (NV) or only varices not needing treatment (VNNT) on initial screening EGD. This practice exposes patients with compensated cirrhosis to procedural risk and may increase their healthcare cost without definite benefit.

The EVendo score, validated in 2019, predicts the presence of esophageal varices (EV) and varices needing treatment (VNT) in patients presenting for initial screening EGD. This study, in a multicenter patient cohort, aims to extend and validate the use of the EVendo Score for variceal surveillance purposes.

Methods and Materials

We performed a retrospective cohort study of outpatients with cirrhosis undergoing variceal surveillance EGD from January 2019 to August 2021 at Olive View UCLA Medical Center, Ronald Reagan UCLA Medical Center, and Greater Los Angeles VA Medical Center.

Child-Turcotte-Pugh (CTP) Class A patients without prior variceal hemorrhage or VNT on screening EGD were included. VNT was defined as EV \geq F2 (medium size) or any EV with high-risk stigmata. Patient data including sex, age, race/ethnicity, etiology of cirrhosis, MELD-Na score, Hgb, platelet count, AST, and BUN were abstracted. EVendo score was then calculated for each patient.

Results

A total of 101 patients were studied. There were 80 patients (79.2%) with NV or VNNT and 31 patients (30.7%) with VNT on surveillance EGD.

Patients with NV and VNNT were older than patients with VNT (62.5 [55.5-70] vs 58.5 [47.5-62]) years, $p=0.007$).

There were no statistical differences in sex, race/ethnicity, MELD-Na score, or etiology of cirrhosis between the two groups.

Using the original EVendo Score cutoff, 23 patients (22.8%) had a score \leq 3.90, none of whom had VNT.

A total of 78 patients had an EVendo score $>$ 3.90, 20 (25.6%) of whom had VNT.

The EVendo Score had a sensitivity of 95.1%, specificity of 35.0%, positive predictive value of 50.0%, and negative predictive value of 91.3% (Table 1).

Use of the EVendo Score would have reduced low-yield surveillance EGDs by 22.8% (23/101).

Table 1. EVendo Score Performance

EVendo Score Performance	
Sensitivity	95.1%
Specificity	35.0%
Positive Predictive Value	50.0%
Negative Predictive Value	91.3%

Discussion

This study validates the extended use of the EVendo Score to risk stratify CTP A cirrhosis patients referred for EV surveillance and to defer low-yield surveillance EGDs. Similarly, the EVendo Score is a reliable tool to predict whether variceal surveillance EGD would be indicated to identify VNT.

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