

A Clinical Dilemma: Surveillance of Barrett's Esophagus in the Face of Concurrent Esophageal Varices

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Introduction

- The diagnosis and management of non-dysplastic, dysplastic, and neoplastic Barrett's esophagus (BE) can be complicated by the presence of esophageal varices (EV).
- Due to the bleeding risk associated with esophageal varices, biopsies of suspected BE can be challenging to obtain.
- Patients with both varices and BE may not receive adequate surveillance of their Barrett's esophagus and may be at an increased risk for esophageal adenocarcinoma.

Methods

- Study design:** Retrospective case series at a single tertiary care center from 2010-2021 analyzing whether patients with Barrett's esophagus and concurrent esophageal varices received adequate surveillance of BE related pathology
- ICD 10 codes used to extract data for patients with concurrent diagnoses of both BE and EV seen on a single esophagogastroduodenoscopy (EGD).
- Information collected: age, sex, cause of portal hypertension, length of BE, size of esophageal varices
- Outcomes analyzed: whether biopsies were obtained in diagnosis and surveillance of BE, and the development of dysplasia and/or esophageal adenocarcinoma

Results

- A total of 12 patients were included in the cohort as described in **Table 1**.
- Only 5 (41.7%) of the 12 patients with EV and BE received adequate surveillance. In these 5 cases, biopsies obtained to confirm the diagnosis of BE and routine endoscopic surveillance of BE was performed every 3-5 years with repeat biopsies.
- Due to risk of bleeding, the remaining 7 patients did not receive adequate surveillance of BE as described in **Table 2**.
- Two cases developed advanced pathology (high grade dysplasia and invasive esophageal adenocarcinoma) with 1 resulting death from esophageal cancer.

Table 2: Cases without Adequate BE Surveillance*

Case	Length BE	Size esophageal varices	Biopsy for diagnosis?	BE progression seen endoscopically?	Biopsy after progression?
#1	short	small	N/A due to bleeding risk	none	N/A
#2	long	large	N/A due to bleeding risk	none	N/A
#3	unspecified	small	N/A due to bleeding risk	none	N/A
#4	long	small	N/A due to bleeding risk	nodular development	metaplasia, negative for dysplasia
#5	short	large	N/A due to bleeding risk	cratered ulcer	brush biopsy negative for malignancy
#6	long	large	indefinite for dysplasia	increased length BE	high grade dysplasia
#7	long	large	N/A due to bleeding risk	nodular development	esophageal adenocarcinoma

*adequate surveillance defined as repeat biopsy q3-5 years for BE without dysplasia, in 3 to 6 months for indefinite dysplasia

Table 1: Baseline Characteristics (N=12)

Male, n (%)	9 (75.0%)
Age (years), mean ± SD	63.8 ± 9.7
Cause portal hypertension, n (%)	
Alcoholic cirrhosis	8 (66.7%)
Nonalcoholic steatohepatitis	2 (16.7%)
Primary biliary cholangitis (PBC)	1 (8.3%)
Cryptogenic	1 (8.3%)
Length Barrett's esophagus, n (%)	
short (<3cm)	5 (41.7%)
long (> 3cm)	5 (41.7%)
unspecified	2 (16.7%)
Size of Varices, n (%)	
small (grade I and II)	3 (25.0%)
large (grade III)	9 (75.0%)

Discussion

- This small study of 12 patients with BE and EV suggests that endoscopic surveillance may not be prioritized in the setting of varices.
- Two of these patients without adequate surveillance developed advanced pathology.
- As a subset of these patients may still develop dysplasia and even adenocarcinoma, decision-making in this setting should weigh the relative risks of surveillance endoscopy and biopsies versus a more conservative approach.