Does video capsule endoscopy improve management and outcomes of inpatients?

Talal Seoud MD[1], Jade Marhaba MD[1], Daniel Jamorabo MD[1]

[1]Stony Brook Medicine, NY

Background

Video capsule endoscopy (VCE) has become an important tool in the evaluation of the GI tract but its use the inpatient setting remains controversial. We aimed to evaluate if the use of VCE altered inpatient management and/or resulted in subsequent inpatient procedures and to assess length of hospital stay and costs directly related to VCE deployment

Methodology

This is a single-center observational study involving inpatients who presented to SBUH and underwent VCE from 1/1/2018 through 1/1/2022. Chi-square tests were used to compare proportions for categorical variables. T-tests were used to determine statistical significance for numerical variables. All analysis done on R (Version 3.65).

Results

206 inpatients presented to SBUH and underwent VCE from 1/1/2018 through 1/1/2022. 123 (59.7%) of those patients were male and 83 (40.3%) were female.

There were no variables associated with a risk for subsequent procedures after VCE deployment unless melena was present (OR 2.3, [1.3-4.1], p<0.0001).

Table 1 Patient Characteristics	
Mean Age (Standard deviation)	72.3 (12.4)
Mean Body Mass Index	29.4 (6.46)
Number of Women (%)	83 (40.3)
Number of Men (%)	123 (59.7)
Race, White, Number (%)	183 (88.8)

Table 2: Findings	
Indication:	
Melena	105 (51.0)
Anemia	185 (89.8)
Hematochezia	32 (15.5)
Abdominal pain	12 (5.8)
Subsequent procedure:	
Colonoscopy	15 (15.8)
EGD	31 (32.6)
Push Enteroscopy	32 (33.7)
Single/Double-Balloon Enteroscopy	17 (17.9)
Type of lesion found on subsequent procedure	
AVMs/Angioectasias	63 (66.3)
Ulcers	12 (12.6)
Polyps	9 (9.47)
Dieulafoy	3 (3.16)
Mass	3 (3.16)
None	5 (5.26)
Readmission for recurrent bleeding	50 (24.3)
Mean time of discharge after capsule read, hours, (SD)	122 (130)
Mean readmission time after discharge, days, (SD)	27 (26.3)
Mean duration of stable Hemoglobin prior to capsule deployment, hrs, (SD)	34.1 (21.4)

Discussion

Melena was least likely to resolve prior to VCE deployment and was the only variable associated with a risk for subsequent procedures after VCE deployment.

A stable hemoglobin level (Hgb) prior to VCE deployment predicted a faster discharge and a less likelihood of readmission.

A longer duration of Hgb stability prior to VCE deployment predicted a less likelihood of readmission.

Conclusions

VCE has become an important tool in the evaluation of the GI tract and most notably for GI bleeding. Having a stable Hgb prior to VCE deployment led to faster discharge times and less rates of readmission.