Introduction

- Video capsule endoscopy (VCE) is noninvasive small-bowel (SB) imaging with visualization of up to 20 feet of small bowel.
- The AGA recommends a bowel preparation before VCE. Bowel preparations do not appear to improve pill cameras reaching the cecum. Incomplete VCE is common in hospitalized patients, with a rate as high as 35%, prompting more diagnostic tests and further costs of care.
- Currently, there is no standardized SB preparation or diet, or accepted, validated scale to assess the quality of SB preparation for hospitalized patients undergoing VCE. The usefulness of purgative bowel preparations and/or modified diets in improving VCE rate in hospitalized patients is controversial.

Objective

- To evaluate the effect of bowel preparation and diet on the rate of successful completion of VCE in our institution.

Methods

- We retrospectively reviewed VCE reports performed in hospitalized patients at Advocate Lutheran General Hospital from January 1, 2019 to December 31, 2019.
- Information collected included bowel preparation and diet prior to VCE, location of the capsule at the end of the recording, and whether the pill camera reached the cecum with or without an obstructed view.

Results

- Figure 1. The Impact of Bowel Preparation on Percent of Complete or Incomplete VCE. Of 29 (46%) patients who had a bowel preparation (polyethylene glycol or magnesium citrate), 62% (p=0.31, Fisher’s Exact Test) had complete VCEs.

- Figure 2. The Impact of Liquid Diet Prior to VCE on Percent of Complete or Incomplete VCE. Of 41 (65%) patients who had a liquid diet the day prior to VCE, 56% (p=0.78, Fisher’s Exact Test) had complete VCEs.

- Figure 3. The Impact of PEG Bowel Preparation and Liquid Diet Prior to VCE on Percent of Complete or Incomplete VCE. Of 24 patients who had the combination of PEG and liquid diet the day prior to VCE, only 14 (58%, p=0.53, Fisher’s Exact Test) had complete VCEs.

Discussion

- The rate of successful completion of VCEs in hospitalized patients does not appear to be affected by a bowel preparation or dietary modification. Of the 63 VCEs performed, 42 (67%) capsules reached the cecum irrespective of visualization and 34 (54%) capsules reached the cecum with adequate visualization (complete VCE). Bowel preparation, either alone or in combination with a liquid diet, did not statistically significantly affect the VCE completion rate (p=0.53, Fisher’s Exact Test).
- Our results correspond with recent meta-analytic findings that failed to show an increase in the rate of complete VCEs or accelerated small bowel transit time with purgative bowel preparations. Our data is suggestive that the using of a prokinetic should be considered as an intervention to improve the rate of complete SB examination in hospitalized patients undergoing VCE.