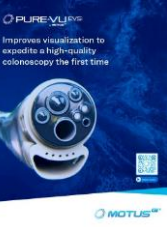


Utilizing the Mobile Pure-Vu System for Inpatient Colonoscopy for patients with an LVAD: A Case Report

Priscila Olague MD, Scott Larson MD PhD, Andrew Herman MD.

Division of Gastroenterology, University of Texas Health Science Center at Houston



INTRODUCTION

Colonoscopy is considered the standard for colon cancer screening. A key factor in ensuring high quality colonoscopy is adequate colon cleansing. In hospitalized patients, bowel preparation is often challenging and inadequate cleansing is often due to patient's inability to tolerate the preparation, slow bowel transit in the setting of immobilization and acute illnesses, and the use of motility-altering medications. Poor bowel preparation limits visualization of the colonic mucosa and can lead to incomplete colonoscopies, missed pathology, adverse events, prolonged hospital stays and increased costs. New technologies have been developed to improve bowel preparations intra-procedurally. The Pure-Vu EVS system, which is an over-the-scope irrigation and cleansing tool is one of these devices. This case report describes a novel use of the Pure-Vu EVS system to improve inpatient colonoscopy prep for a patient with a left ventricular assist device (LVAD).

The Case

A 58 year-old female with past medical history significant for chronic systolic heart failure and ischemic cardiomyopathy status post Left Ventricular Assist Device (LVAD) one year prior presented for screening colonoscopy as part of a pre-transplant evaluation. As part of orthotopic heart transplant evaluation she was admitted to the hospital for IV heparin bridging prior to screening colonoscopy. After admission, the patient was started on standard bowel prep consisting of 4L of Polyethylene glycol and Dulcolax suppositories. Despite completion of prep, she continued to pass sediments and prep was deemed inadequate. The patient's LVAD anticoagulation had been held for the procedure and the decision was made to proceed with colonoscopy utilizing the Pure-Vu EVS device. During the procedure the clinical team utilized the Pure-Vu EVS device and performed the procedure with cardiovascular anesthesia. The Pure-Vu EVS system effectively irrigated and suctioned areas of inadequate bowel prep with sediment larger than 3.8 mm, allowing for improved visualization of the colonic mucosa. The Boston Bowel prep score was improved from a 5 to an 8 after cleansing.

CONCLUSIONS

Pure-Vu EVS allowed for the performance of a screening colonoscopy as part of orthotopic heart transplant evaluation in a patient with an LVAD admitted to a hospital inpatient service. This case report describes one of the first cases of the utilization of this unique technology in a patient requiring inpatient screening colonoscopy with advanced heart failure. Further studies are needed to understand the various uses of this novel device.