

Mid-gut exploration: video-capsule endoscopy cannot always determine the insertion route of device-assisted enteroscopy



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Mid-gut exploration is achieved with video-capsule endoscopy (VCE) and device-assisted enteroscopy (DAE), including motorized spiral enteroscopy (MSE).¹ VCE and DAE are complementary procedures²; whereas VCE can be used as first-step noninvasive diagnostic procedure, DAE requires deep sedation or general anesthesia, time, and expertise.³ Despite previous studies proposing a time index based

on VCE landmarks to guide the choice of route (antegrade vs retrograde), this decision can be challenging.^{4,5} Several guidelines also highlighted the important role of small-bowel cross-sectional imaging such as dynamic contrast enhanced CT, computed tomography enterography, or magnetic resonance enterography in the management of small bowel bleeding and masses.⁶⁻⁸ We illustrated this

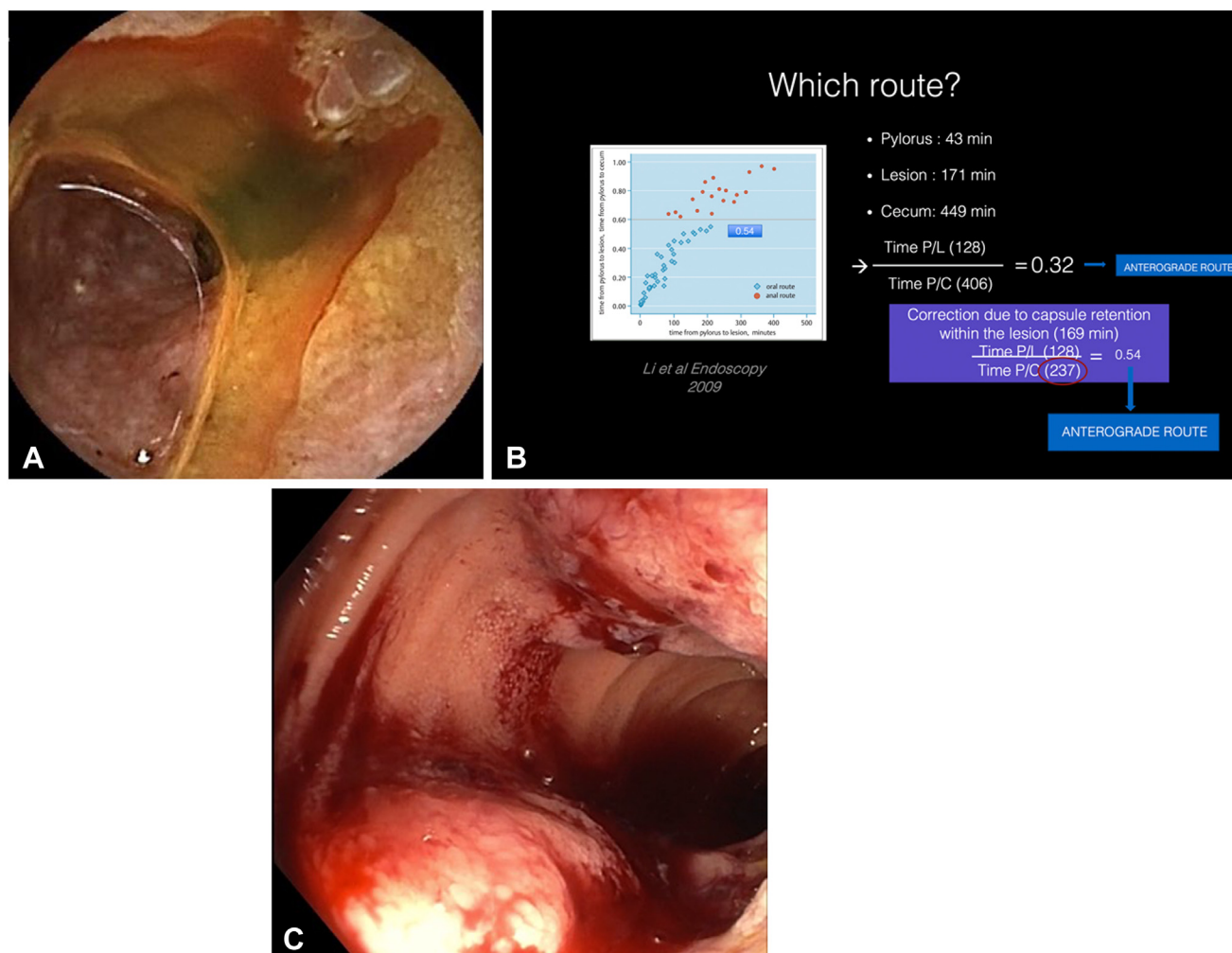


Figure 1. **A**, Actively bleeding obstructive lesion visualized through the video-capsule endoscopy in the ileum. **B**, The lesion's time-index location is calculated as the ratio of the transit time from the pylorus to the lesion and the transit time from the pylorus to the cecum, suggesting an antegrade approach. (Adapted from: Li X, Chen H, Dai J, et al. Predictive role of capsule endoscopy on the insertion route of double-balloon enteroscopy. *Endoscopy* 2009;41:762-6.) **C**, Hemi-circumferential lesion localized 70 cm above the ileocecal valve identified during the retrograde motorized spiral enteroscopy.

issue with a clinical case: a 49-year-old patient with a kidney transplant underwent VCE for melena and anemia after normal esogastroduodenoscopy and colonoscopy. Cross-sectional modalities were not used because of chronic renal failure impeding administration of intravenous contrast. An actively bleeding obstructive lesion was identified in the supposed proximal part of the ileum (Fig. 1A). Using the time-index, we performed antegrade MSE (Fig. 1B). Despite good progression (400 cm), the lesion was not reached. The deepest point of insertion was tattooed. Consequently, we performed a retrograde MSE in a second session, where the tumor (lymphoma) was reached at 70 cm above the ileocecal valve (Fig. 1C). In conclusion, VCE time-index is an estimation and cannot always determine accurately the preferred approach before MSE, especially when the lesion is obstructive. Although cross-sectional modalities were not used in this particular case, they should be considered in managing small-bowel bleeding and masses. Motorized spiral has shown an acceptable safety profile, but caution is recommended during insertion, progression, and retrieval (Video 1, available online at www.giejournal.org).^{9,10}

DISCLOSURE

All authors disclosed no financial relationships.

Abbreviations: DAE, device-assisted enteroscopy; MSE, motorized spiral enteroscopy; VCE, video-capsule endoscopy.

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