Improving Fellows’ Small Bowel Capsule Endoscopy Competency: A Computer-Aided and Video-Based Tutorial

David Wan, MD
Assistant Professor of Medicine
Associate GI Fellowship Program Director
New York Presbyterian/Weill Cornell
Formal Capsule Training is Limited, but Computer-Based and Structured Training May Close Educational Gap

- GI Societies recommend 20-25 studies for competence; 10-20 reviewed w/ expert
- Only 42% of fellows reached threshold of 25 (Surg Endosc 2015 29:3570-78)
- Computer-based capsule training can improve lesion detection (Gastrointest Endosc 2009;70(2):310-6)
- Structured capsule endoscopist supervision and competency test can track and improve fellows’ performance (Gastrointest Endosc 2013 (78)4: 617-622)
Proposed SBCE Tutorial

• Pre-Test Questions
  – background information (i.e. indications, contraindications, etc.)
  – recognizing images and making recs from clips/full-length videos

• Basic Video Tutorial:
  Indications/Contraindications Software Orientation
  Capsule Prep Capsule Reading Algorithm
  Details of Procedure Procedure Documentation
  Lead Placement (Diagram)

• Review of Major Categories of SB findings (i.e. normal, GI Bleed, Crohn’s, tumors, celiac disease, etc.)
  – background slides
  – still images w/ visual clues and verbal descriptors
  – includes 20s clips

• Post-Test w/ Feedback
Sample Tutorial Case Study

70F w/ iron-deficiency anemia referred for capsule endoscopy.

PMHx: Conn’s syndrome s/p adrenalectomy, bladder CA, s/p parathyroidectomy

EGD: gastritis; Colonoscopy: hyperplastic polyp

After review of capsule, what would be the next appropriate step?
A) Balloon-assisted enteroscopy
B) Refer to surgery
C) Replete iron and f/u CBC monthly
D) Get CT enterography
E) Get PET/CT

ANSWER: D. The video shows a bulge that is more likely a submucosal tumor given surface erosion, stretched, thin white mucosa, lobulation, loss of folds, and presence on multiple images. Before surgery, CTE is indicated to r/o metastatic or synchronous dz.