

Yield of Antegrade Double Balloon versus Spiral Enteroscopy for Obscure Gastrointestinal Bleeding

Schembre, Drew¹; Ross, Andrew S.¹

Gastroenterology, Virginia Mason Medical Center, Seattle, WA, USA.¹

Abstract

Introduction: Double balloon (DBE) and spiral (SE) enteroscopy both enable deep intubation of the small bowel via a designated enteroscope combined with a flexible overtube designed to pull, pleat and shorten the small intestine. DBE represents the industry standard, has a high diagnostic yield for obscure gastrointestinal bleeding (OGIB) and facilitates endoscopic therapy. SE is a newer technology that relies on rotation of a threaded overtube rather than a balloon and traction to shorten bowel. SE has not been compared to any other modality.

Aims and Methods: Patients who underwent antegrade DBE or SE over the 11 month period (January through November 2008) since SE was introduced at one institution (VMMC) were reviewed. Both DBE and SE were performed with a 2.8mm channel, 200cm Fujinon enteroscope. DBE utilized a 145cm balloon overtube and SE used a 140cm Spirus MedicalTM Discovery SB[®] threaded overtube. All enteroscopies continued until a convincing bleeding source was identified or forward advancement ceased. Indications, prior capsule results, positive finding, procedure time, therapy and complications were compared.

Results: 34 DBE and 23 SE cases were performed via the oral approach during the review period. 24 DBE and 19 SE cases were performed for OGIB of which 18 (75%) DBE and 16 (83%) SE cases had capsule findings which were considered positive for a bleeding source. DBE was technically possible in all patients; 1 SE case failed due to inability to engage the overtube within the jejunum. Median age was 61.5 years for DBE and 68 for SE ($p=0.04$). Average procedure time was 77 minutes for DBE and 59 minutes for SE ($p=0.16$). A bleeding source was identified at retrograde enteroscopy in 1 of the negative DBE cases and 2 SE cases. These were excluded from yield analysis. Yield for detecting a bleeding source was 70% for DBE and 65% for SE ($p=0.74$). Therapy was applied to all SE cases (all AVMs) and to 79% of DBE cases. No complications occurred in either group. 3 patients underwent both DBE and SE during a single session. In one patient, DBE and SE reached the same point at 30 and 35 minutes, respectively. In one patient, the double balloon enteroscope was passed 100cm distal to depth reached by SE but no bleeding source was found. In the third patient, DBE was successfully performed following a failed SE, however no bleeding source was identified.

Conclusion: Both DBE and SE facilitate detection and treatment of small bowel bleeding sources in the majority of cases of OGIB. DBE depth may exceed SE, although SE may be somewhat faster than DBE. A randomized trial of both therapies is necessary to determine the relative merits of each technology.