

Comparing Antegrade Double Balloon and Spirus Enteroscopy in the Management of Anemia and Small Bowel Crohn's Disease A Single Center Experience

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Abstract

Purpose: There has been growing experience with exploration of small bowel with Double Balloon Enteroscopy (DBE) - widely regarded as the industry standard. Spirus Enteroscopy (SE) is a newer technology, where rotation of an over-tube with raised spirals, is used to pleat and shorten the small bowel. Over the past 2 years, experience with both these technologies has increased, with emergence of newer indications. Here we report the largest single center experience thus far, and compare their diagnostic and therapeutic efficacy.

Methods: Patients, who underwent antegrade DBE or SE from July 2008 (when SE was introduced at our institution) through June 2009, were reviewed. DBE and SE were performed with 200 cm Fujinon and Olympus Enteroscopes. DBE utilized a 145 cm balloon over-tube and SE employed a 120 cm Spirus Discovery SB over-tube with raised spirals. All enteroscopies were continued until the 'lesion' was identified or forward advancement ceased. Demographics, indications, capsule endoscopy (CE) results, procedure time, depth of insertion, findings, therapeutic interventions and complications were compared.

Results: 52 DBE and 39 SE cases were performed via the oral approach. The indications were anemia in 38 (73%) of DBE and 23 (59%) of SE cases, Crohn's disease in 10 (19%) of DBE and 13 (33%) of SE cases, polyposis syndromes in 2 (4%) of DBE and 2 (5%) of SE cases, retained capsule in 1 (2%) DBE and 1 (3%) SE case and ERCP in 1 (2%) DBE case. Overall 92% of the indications for both these procedures involved, evaluation of anemia (59 - 73%) and small bowel Crohn's disease (19-33%). The mean age was 64 years for DBE cases and 59 yrs for SE cases ($P = 0.15$). The average procedure time was 55 minutes for DBE and 47 minutes for SE cases ($P = 0.09$). The mean depth of insertion with DBE was 274 cm and with SE was 254 cm ($P = 0.5$). A positive yield, as indicated by ablation of the angiodysplasias, stricture dilation, tumor-biopsies and polypectomies were accomplished in 16 (31%) of DBE cases and 12 (31%) SE cases. Excluding the 3 cases involving 'capsule retrievals' and ERCP, positive correlation between findings of CE and DBE was seen in 25/50 (50%) of cases and in 16/38 (42%) of SE cases. Both the DBE and SE were technically feasible in all cases and no significant complications were encountered.

Conclusion: Both DBE and SE facilitate deep enteroscopy and have similar efficacy for various diagnostic and therapeutic indications. These techniques are increasingly used in the management of patients with small bowel Crohn's disease, in addition to the management of anemia and gastrointestinal bleeding. A large randomized trial comparing various techniques for deep enteroscopy is needed to determine their relative merits.