Double-balloon Enteroscopy Can Effectively Manage Obscure Gastrointestinal Bleeding – a Retrospective Study
Yip WM(1), Cheng KS(2), Cheung SW(2), Lai SW(1), Li KK(2)
(1)Department of Medicine and Geriatrics, Pok Oi Hospital, (2) Department of Medicine and Geriatrics, Tuen Mun Hospital

Keywords:
double-balloon enteroscopy
obscure gastrointestinal bleeding

Introduction
Obscure gastrointestinal bleeding (OGIB) was traditionally difficult to be managed in the past. Cross-sectional imaging, angiography with embolization, repeated upper and lower endoscopies, and intra-operative enteroscopy were conventional options in such situation. Double-balloon enteroscopy (DBE) is an attractive alternative with diagnostic and therapeutic function.

Objectives
(1) To summarize the finding of DBE in patients with OGIB, (2) to assess the efficacy of DBE in managing OGIB.

Methodology
Obscure gastrointestinal bleeding was defined as 1) overt bleeding with negative conventional endoscopies, or 2) occult bleeding with anemia, or positivity of fecal occult blood, with negative conventional endoscopies. Patients with OGIB failed to localize lesion by conventional endoscopy and underwent DBE were retrospectively recruited. Demographic data, endoscopic data, baseline and follow-up hemoglobin level were retrieved.

Result
From April 2013 to December 2015, 32 consecutive DBEs were performed on 28 patients in Tuen Mun Hospital. Fifty percent of them were male. Age was ranged from 26 to 87 years. Fourteen cases had prior video capsule endoscopy done. Obscure overt bleeding (with clinical evident bleeding) accounted for 16 cases. Mean duration of anemia was 2.87 years. Mean number of oesophagogastroduodenoscopy (OGD) and colonoscopy performed prior to DBE was 2.96 (range 1-7) and 2.18 (range 1-5) respectively. Twenty eight percent of cases (9 patients) had prior angiogram done. Previous computer tomography of abdomen or nuclear scan was performed in 40.6% (13 patients) and 34.4% (11 patients) respectively. Overall diagnostic yield of DBE was 87.5%. Vascular lesions were found in 21 DBEs (65.6%). Ulcerations and polyps were found in 7 and 4 cases respectively. Argon plasma coagulation and hemoclipping were performed in 21 (65.5%) and 4 cases (12.5%) respectively.
Polypectomy was carried out in 4 cases (12.5%). Mean hemoglobin (Hb) at baseline, 3 months, 6 months, and 12 months after DBE were 9.32 g/L (n=32), 10.75 g/L (n=21), 11.67 g/L (n=19), and 10.48 g/L (n=11) respectively. Mean 3-month, 6-month, and 12-month difference in Hb were 2.53 g/L (paired t-test, p=0.01, n=21), 2.23 g/L (paired t-test, p<0.001, n=19), and 3.46 g/L (paired t-test, p=0.12, n=11) respectively.

Conclusions: DBE is an effective modality in managing OGIB with successful improvement in anemia. Early use may prevent unnecessary endoscopies or delay in management.