

Massive gastric antral vascular ectasia successfully treated by endoscopic band ligation as the initial therapy

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Abstract

Gastric antral vascular ectasia (GAVE) accounted for 4% of non-variceal gastrointestinal hemorrhage. Even though unclear pathogenesis, GAVE often associated with chronic renal failure, autoimmune diseases and cirrhosis. Asymptomatic lesions were reasonably not to treated. The treatment options for GAVE are non-endoscopic and endoscopic treatments. For the pharmacological treatment, some success were reported for the use of octreotide, thalidomide and tranexamic acid. While the endoscopic treatment is the mainstay for treatment of symptomatic lesions. The endoscopic ablative therapies such as argon plasma coagulation was reported with good clinical outcomes. However, these treatment options had some limitation due to the need of special equipment and multiple sessions needed to control the bleeding. We reported another treatment option using the routine-achievable instrument such as endoscopic band ligation as an initial treatment which

also provided a good treatment outcome and less sessions.

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Key words: Gastric antral vascular ectasia; Non variceal hemorrhage; Endoscopic band ligation; Water melon stomach; Treatment

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INTRODUCTION

Gastric antral vascular ectasia (GAVE), or water melon stomach, is an uncommon cause of non variceal gastrointestinal hemorrhage. This condition was firstly reported as "an erosive type of gastritis with marked veno-cappillary ectasia" by Rider *et al*^[1,2] in 1953. Up to the present, there had been more data regarding of the epidemiology, pathology including the outcomes of variable treatment modalities for this condition^[1]. Interestingly, there have been many hypotheses regarded the pathophysiology of GAVE which seem to be linked to cirrhosis or portal hypertension. By the way, the other theories such as GAVE and achlorhydria or mechanical stress at the antral area thus caused the detachment of the distal gastric mucosa to the pyloric ring were still be under investigated^[1]. Considering the treatment options for GAVE, the non-endoscopic treatment which aimed to reduce the bleeding without ablative therapy such as beta-blocker, octreotide, Thalidomide or even tranexamic acid reported of only little benefit. The endoscopic therapies had been reported since 1980s^[2-4], using heater probe, followed by

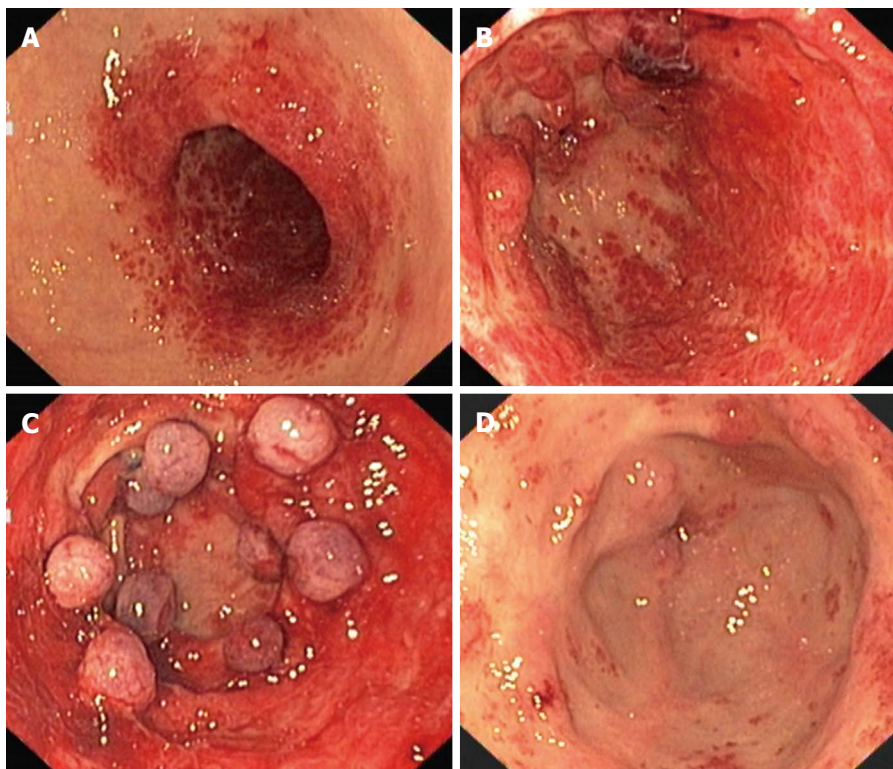


Figure 1 Esophagogastroscopey was done using gastroscope. A, B: The finding revealed raised erythematous stripes radiating from pylorus up to the lower part of gastric body; C: Using endoscopic band ligation as the initial treatment for this particular patient; D: The endoscopic view showed much improvement of the lesions.

many reports of ablative treatment such as argon plasma coagulation (APC), cryotherapy and endoscope-mounted ablative device (HALO⁹⁰). Those ablative therapies reported as high as 80%-100% clinical response, which determined as no further blood transfusion required, after 2-4 years follow up period^[1-6]. However, this treatment options do have some limitations due to requirement of more sessions and the expensive equipments which might be not available in every hospital especially developing countries. Therefore, we reported of another treatment modality which provided an acceptable clinical outcome with less expensive equipment.

CASE REPORT

A 73-years-old female, known case of hypertension and Diabetes mellitus without documented evidence of cirrhosis, presented with chronic progressive anemia with intermittent melena for 4 mo. The bleeding was very severe that weekly blood transfusion required. She underwent esophagogastroscopey (EGD) at the community hospital, the endoscopic finding showed fiery red gastric mucosa, diffusely found at entire antrum and extended to lower portion of gastric body. The biopsy was taken, the pathology revealed GAVE. She was referred to our endoscopic unit. Her blood works showed leukocytosis with anemia (hemoglobin 80 mg/L), otherwise were unremarkable. In the endoscopic suite, the patient was under total intravenous anesthesia (TIVA) with full anesthetic monitoring. EGD was done using gastroscope

(GIF-Q180, Olympus, Tokyo, Japan) the finding revealed raised erythematous stripes radiating from pylorus up to the lower part of gastric body (Figure 1A and B). The endoscopist who performed the procedure decided to use endoscopic band ligation (EBL), using MBL (Wilson-Cook Medical, Winston-Salem, NC, United States), as the initial treatment for this particular patient (Figure 1C). The sequential EBL, which 8-10 bands were applied per session, was scheduled as 4 wk interval for another 2 sessions. The patient responded very well after the first session, only mild gastric discomfort was reported and she was discharged without complication two days later. After seven months followed-up, her hemoglobin level was stable at 110 mg/L, no further blood transfusion required. The endoscopic view showed much improvement of the lesions (Figure 1D).

DISCUSSION

GAVE could be correctly diagnosed from the typical endoscopic finding, however the histopathology might be necessary in some atypical or severe cases such as the present case. There had been many reports regarded of endoscopic treatment options for GAVE, in our opinion; were classified into two groups, which were ablative and non-ablative therapy. The clinical outcomes of ablative therapy such as APC treatment or HALO⁹⁰ system were reported as high as 80%-100% success rate^[1,5,6]. However, these treatments needed special equipment which might not be available in all situations. The non-ablative treat-

ment options which was mentioned here was the EBL. EBL was firstly reported as the treatment for refractory GAVE in the patients who failed other treatment modalities such as APC or hormonal therapy by Sinha *et al*^[7]. Wells *et al*^[8] also reported a case series of 9 patients showed superiority of EBL over endoscopic thermal therapy, which were APC and Bipolar thermal probe therapy, for re-bleeding, hospitalization and post procedure transfusion. The number of treatment sessions was less in the EBL group (1.9 ± 0.6 sessions) than those reported using APC (4.6 ± 4.6 sessions), though it was not a head-to-head comparison^[7,8]. The complications reported for this procedure were very small^[6-10]. Regarding of the extensive involvement of the lesion in the present patient, the endoscopist who performed the procedure chose EBL as the first treatment option. According to the result of the treatment mentioned above, we proposed that EBL could be considered as first line treatment options for the GAVE patients especially for extensive area of involvement.

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