

# Gastric Antral Vascular Ectasia in Cirrhotic Patients: A Retrospective Single-center Study



General Internal Medicine  
NYU Langone Brooklyn Hospital

Howard Chung<sup>1</sup>, Shu-Yen Emily Chan<sup>2</sup>, Yichen Wang, Negar Niknam

## INTRODUCTION

Gastric antral vascular ectasia (GAVE) is a rare cause of GI bleeding. It is associated with portal hypertension, connective tissue disease, and chronic kidney disease. The treatments include medical, endoscopic, and surgical interventions. In this article, we analyzed the characteristics of GAVE patients with cirrhosis and the outcomes of treatments.

## METHOD

We conducted a single-center retrospective study by reviewing the patients with both diagnoses of GAVE and liver cirrhosis who had followed up in NYU Langone healthcare system between 2012 to 2022. IRB exemption was obtained.

## RESULT

A total of 27 patients (16 females and 11 males) met our inclusion criteria. The mean age was 66.3 years old. Alcoholic cirrhosis and NAFLD are the most common etiologies of cirrhosis with GAVE. 21 cases had a history of transfusion. 17 patients were found to have esophageal varices during the endoscopic exam. 85% of GAVE was treated with endoscopic argon plasma coagulation (APC), including four were treated with APC plus band ligation (BL) and one was treated with APC plus radiofrequency ablation (RFA). All GAVE with active bleeding were treated with APC. However, patients without active bleeding from GAVE were also treated with APC if there was cirrhosis complicated by esophageal varices, low hemoglobin, or sign of active bleeding. No significant difference in hemoglobin before and after APC (9.02 vs 9.36) was noticed. Most patients are now actively following up with intermittent blood transfusion and APC treatment as needed. Only four patients expired due to advanced liver disease, not GI bleeding. No APC-related complication or mortality was noted in this study.

<b>Total patient number</b>	<b>27 (100%)</b>
<b>Mean age</b>	66.3 years old
<b>Gender</b>	
- Male	11 (41%)
- Female	16 (59%)
<b>Etiology of cirrhosis</b>	
- Alcoholic cirrhosis	9 (33%)
- NASH/NAFLD	10 (37%)
- HBV	1 (4%)
- HCV	1 (4%)
- PBC	1 (4%)
- schistosomiasis	1 (4%)
- unspecified	4 (15%)
<b>Esophageal varices found during EGD</b>	17 (63%)
<b>Active bleeding from GAVE found during EGD</b>	11 (41%)
<b>Mean Hb before vs after interventions</b>	9.02 vs 9.36
<b>History of transfusion</b>	
- Yes	21 (78%)
- No	6 (22%)
<b>Treatment of GAVE</b>	
- medicine	3 (11%)
- APC	23 (85%)
- BL	5 (19%)
- RFA	1 (4%)
<b>Mean of APC sessions</b>	2.67
<b>Outcome</b>	
- Expired	4 (15%)

## CONCLUSION

APC was the most used first-line endoscopic therapy in cirrhotic patients with GAVE. Our study revealed that it is safe but not curative. Most patients required multiple sessions with intermittent transfusion. A long-term follow-up is required to thoroughly evaluate the outcomes of different interventions.

## REFERENCES

- Naidu, H., Q. Huang, and H. Mashimo, *Gastric antral vascular ectasia: the evolution of therapeutic modalities*. *Endosc Int Open*, 2014. **2**(2): p. E67-73.
- Hsu, W.H., et al., *Insights into the management of gastric antral vascular ectasia (watermelon stomach)*. *Therap Adv Gastroenterol*, 2018. **11**: p. 1756283x17747471.
- Mohan, B.P., et al., *Endoscopic band ligation in the treatment of gastric antral vascular ectasia: a systematic review and meta-analysis*. *Gastrointest Endosc*, 2021. **94**(6): p. 1021-1029.e10.
- Chalhoub, J.M., et al., *Endoscopic band ligation compared to thermal therapy for gastric antral vascular ectasia: A systematic review and meta-analysis*. *United European Gastroenterol J*, 2021. **9**(2): p. 150-158.