

Watermelon Stomach in Gastric Antral Vascular Ectasia and its Histopatology Finding

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Abstract: Watermelon stomach is a sign of stomach bleeds which forms the line in stomach and only can be seen by endoscopy. This disease commonly found in older women (over age 70 years). The exact cause of this disease is still unknown and rarely found. We present a 47-year-old patient with gastric antral vascular ectasia without anemia admitted at Wangaya Regional Hospital Denpasar. Patient's endoscopy claimed a watermelon stomach finding. This case report showed that patient with watermelon stomach did not always happened to older women. We also have to aware to diagnose this disease in order to achieved therapeutic goals and prevent the complication.

Keywords: Watermelon stomach, gastric antral vascular ectasia, endoscopy

1. Introduction

Watermelon stomach (WMS) is a sign of stomach bleeds which forms the line in stomach and only can be seen by endoscopy in patient with gastric antral vascular ectasia (GAVE). WMS is pictured by endoscopic visualization of raised red strips on the tips of gastric folds radiating outward from the pylorus, or discrete red angioma that may extend proximal to the antrum.¹⁻² Rarely found (responsible for around 4% of nonvariceal upper gastrointestinal bleeding), WMS usually is suffered by older women (over age 70 years). Generally, iron deficiency anemia and history of overt or occult GI bleeding appear in this disease. Unlike portal hypertensive gastropathy, bleeding from WMS will not respond to therapy aimed at reducing the portal pressure gradient.⁴⁻⁶

We present a case of GAVE admitted at Wangaya Regional Hospital Denpasar that suffered by 47-year-old female without anemia. Management of GAVE is still challenging issue. This case report is substantial to encourage us more aware to diagnose GAVE in younger patient. Early diagnosis accuracy will avoid patient from bleeding complication and reduce the mortality.

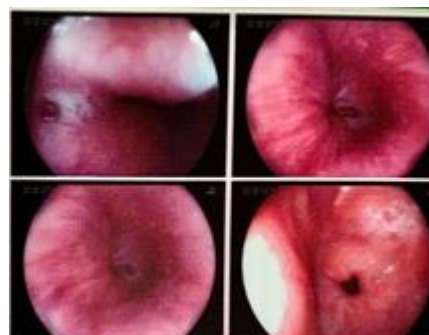
2. Case Report

A 47-year-old female was admitted due to abdominal pain at epigastric since 2 weeks ago and get worse in 3 days prior to hospitalization. Patient also complain about nausea, vomiting, and breathless. Those sign get worse after patient eat. Patient did not menstruate for 2 months because she got contraceptive injection. She had history of peptic ulcer induced by NSAID and already had underwent endoscopy for 3 times 5 years ago.

On vital sign assessment, the patient was fully conscious. Blood pressure was 120/80 mmHg and heart rate was 80 beat per minute. The respiratory rate was 18 per

minute with 93% oxygen saturation room air. Physical examination showed abdominal tenderness in epigastric.

Laboratory examination revealed a normal hematology. Electrolyte examination showed hypernatremia (Natrium = 150 mmol/L) and slightly hypokalemia (Kalium = 3,4 mmol/L). Urinalysis, liver function, and renal function were in normal limit. Chest x-ray of the patient revealed normal lungs and heart. Endoscopy showed watermelon stomach and we planned pathology anatomy biopsy. Stomach biopsy describe that the corpus epithelial surface is lined with columnar epithelium without intestinal metaplasia. There was also a mild distribution of lymphoplasmic inflammatory cells (+1). In the antral, its epithelial surface is lined with columnar epithelium without intestinal metaplasia. The gastric foveola appears, slightly tortuous (corkscrew), and was lined with the same epithelium as the surface epithelium. There was also a mild distribution of plasmalymphocytic inflammatory cells (+1) in antral. *Helicobacter pylori* did not found. The patient was treated ringer lactate infusion, ondansetron injection 3 x 4mg, esomeprazole injection 2 x 40 mg, antacid 3 x C1, sucralfate 3 x C1, and paracetamole 3 x 500 for 1 day. After endoscopy finding showed watermelon stomach, we treat the patient with methylprednisolone 2 x 62,5 mg for 3 days. Patient's complain about abdominal tenderness, nausea, vomiting, and breathless get much better after received methylprednisolone. All features of GAVE completely resolved and she was discharged on the 4th day of hospitalization.



Volume 10 Issue 6, June 2021

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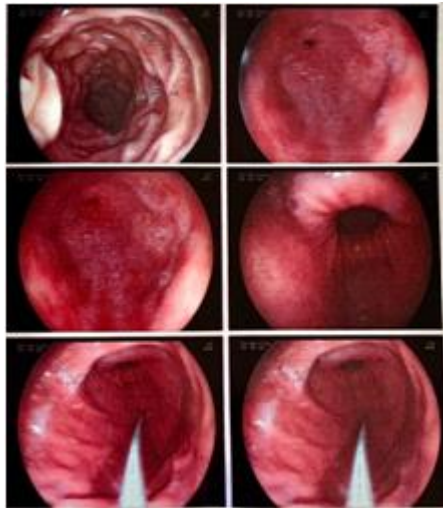


Figure 1: Endoscopy result

3. Discussion

Clinical presentations of GAVE is vary widely, from asymptomatic occult blood loss to overt gastrointestinal bleeding. Most patients are elderly and females number twice that of males. Some mechanisms have been predicted for the development of GAVE. Altered antrum motility and chronic mucosa trauma, subsequent submucosa fibromuscular hyperplasia, and dilation of mucosal capillary are the main contributing factors.^{6,7} The reported patient, 47 years old, showed sign of dyspepsia without any complain that related to anemia. Hematologic examination also did not show any abnormality. Absence of anemia indicates that there was no any blood loss. We can state that the GAVE was still in the early stages. Consuming NSAID most of the time signifies a chronic mucosa trauma induced by NSAID.

GAVE or watermelon stomach is characterized endoscopically by parallel red stripes, angiomatous lesions at antral mucosal folds resembling watermelon stripes.^{1,2} Biopsy will show histological clues with dilated tortuous mucosal capillaries, focal thrombosis, spindle cell proliferation and fibrohyalinosis.⁶ Endoscopy showed watermelon stomach and we planned pathology anatomy biopsy. Biopsy showed that antral mucosa was slightly tortuous (corkscrew) and lined with the same epithelium as the surface epithelium. There was also a mild distribution of plasmalymphocytic inflammatory cells (+1) in antral. *Helicobacter pylori* did not found. From endoscopy and biopsy result we diagnosed the patient with watermelon stomach confidently.

Corticosteroid is a common medication for autoimmune disease. Several case reports demonstrating that oral prednisolone improved blood loss and decreased blood transfusion requests in GAVE cases.⁸ This case report show an early use of corticosteroid (methylprednisolone 2 x 62,5mg) to prevent bleeding complication. This intervention was successful and made the patient did not experience blood loss and anemia.

The use of proton-pump inhibitors (PPIs) shows some benefit to GAVE symptoms. Patients were routinely given PPI with standard dose to facilitate healing of iatrogenic

ulcer and to prevent secondary bleeding.⁹ In this case, we gave PPI to the patient since day 1 she was admitted to hospital. This therapy was proven to be effective preventing the incident of stomach bleeding in GAVE or WS.

4. Conclusion

GAVE or WS is a very rare disease and this case report showed that GAVE or WS did not always happened to older women. A careful and precise examination is needed to diagnose GAVE. The sooner GAVE is diagnosed, the less bleeding complication occur. Early and precise therapy according to disease (GAVE or WS) will recover patient without experience the bleeding complication.

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