

CASE REPORT

GASTRIC VASCULAR ECTASIA

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In this paper the condition Gastric Vascular Ectasia (GAVE) is reviewed and two patients of gastric vascular antral ectasia are reported (GAVE). It is suggested that the diagnostic possibility of Gastric antral vascular ectasia should be considered in any elderly patient, more so in females, with persistent unexplained Iron deficiency anaemia.

INTRODUCTION

Since the description of a case of gastritis with veno-capillary ectasia as a source of massive haemorrhage by Rider et al in 1953¹ many cases have now been recognised. In 1984 Jabari et al² further defined this condition as 'watermelon stomach' based on its endoscopic appearance. This condition appears to be a somewhat rare entity. This is report of two cases of this disease, both encountered at Hairmyres Hospital, Glasgow over a period of five years during which 2500 endoscopies were done.

CASE 1

A 64 years old lady was admitted for an episode of melena, which had been preceded by one month of upper abdominal pain, against a long background of dyspepsia. On examination she was found to be anaemic.

Investigations showed iron deficiency anaemia and haemoglobin (Hb) 10.5 g/dl. Stools were positive for occult blood. Barium meal and follow through showed persistent narrowing and reduced distensibility in region of gastric antrum. The mucosal pattern however appeared intact. Upper G.I. endoscopy showed very striking red streaked appearance of antrum with multiple small raised red lesions. Biopsy from the lesion showed small collection of telangiectatic capillaries lined by prominent endothelial cells and one vessel contained thrombus. Biopsy from gastric area showed mild to moderate active chronic gastritis. While she was under observation her stools continued to be positive for occult blood. Her Hb fell to 9.2g/dl. She was transfused. Repeat endoscopy showed essentially similar features. She was subjected to Antrectomy and Billroth I anastomosis. Gross biopsy specimen of pyloric antrum showed prominence of rugae with red streaks over the tips of gastric folds. Small foci were seen in mucosa. There were small groups of blood vessels in submucosa. Histology showed several small groups of superficially located dilated capillaries, some of which contained fibrin thrombus. There was focal fibromuscular proliferation in the lamina propria. The submucosa was oedematous. There were groups of ectatic venous channels. Her haemoglobin remained stable at around 14g/dl after surgery during two years follow up.

CASE 2

A 73 years old woman was admitted for weight loss, malaise, dyspnoea and ankle swelling. On examination she was anaemic. She also had atrial fibrillation and signs of early congestive cardiac failure.

Her investigation showed iron deficiency anaemia due to chronic blood loss and Hb 7.1g/dl. Stools were positive for occult blood. ESR was high. Immunoglobulins showed very high IgM 8.47g/l (91% mean normal adult value). Liver Function Tests showed mild elevation of ALT (45.2). Barium meal and enema were normal.

She was treated for congestive cardiac failure. She was transfused. As her symptoms remained unchanged with persistently low Hb, an upper GI endoscopy was done to exclude primary gastric lesion.

The gastric antrum was grossly abnormal with typical appearance of watermelon stomach (Figure1).

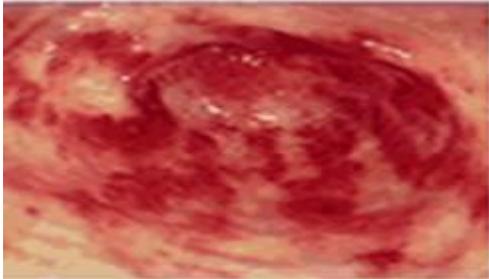


Figure 1: An upper endoscopy reveals longitudinal erythematous stripes resembling stripes of a water melon

Biopsy from the lesion showed small group of telangiatic vessels some of which contained thrombus in lamina propria. In addition fibromuscular element was present in mucosa.

She was advised surgery, which she refused. She is still being followed up and remains rather tired and her last checked Hb

was 9.4g/dl

DISCUSSION

In an elderly patient, especially in females persistent iron deficiency anaemia with hypochlorydria or achlorhydria should warrant the diagnostic possibility of gastric vascular ectasia. The mean age of presentation is 69.1 years (range 42-89 yrs). Patient most commonly present with chronic occult blood loss or recurrent acute haemorrhage.^{3,4} The common clinical presentations are iron deficiency anaemia (88%), Faecal Occult Blood (FOB) positive (42%), Melena (15%), hematemesis (3%) and rarely hematochezia (1%).⁵ The occult bleeding is transfusion dependent with a mean of 10 units over a 12-month period.

The aetiology of this condition remains unknown; one theory being that water melon stomach is caused by recurrent episodes of antral mucosal prolapse into pylorus that leads to mucosal trauma and ischemia.

Other conditions are associated with this condition. In one series³ the most common associated disorders were Raynaud's phenomenon (31%) and sclerodactyly (18%). Other associated conditions include hypothyroidism, primary biliary cirrhosis, diabetes mellitus and autoimmune liver disease.³⁻⁷

The diagnostic endoscopic findings are both uniform and remarkably characteristic, these include longitudinal rugal folds transforming the antrum and converging on pylorus, each containing a visible convoluted column of vessels, the aggregate resembling the stripes of water melon.²

Other features include gastritis with evidence of mucosal prolapse. Conventional radiology is often non-specific. Both gross appearance of resected antrum and microscopic picture is characteristic. The resected specimen shows thickened mucosa with torturous submucosal venous channels. Microscopic picture may show dilatation of muscoal capillaries with focal thrombosis and fibromuscular hyperplasia of lamina propria^{1,2}.

The therapeutic options are numerous for this condition and need to be individualised. Improvement of anaemia with out further iron supplementation following surgery in patients including one of our own case (Case1)

suggest that the most appropriate treatment for this condition is antrectomy with Billroth I anastomosis, but their is mortality of 7.4%⁸ associated with this operation.

Endoscopic therapy has been shown to be effective with a minimal mortality. Endoscopic therapy, including the NDYAG laser, argon laser, heater probe, bipolar therapy have been effective as a treatment. The number of endoscopic sessions needed varied between 3-4 sessions over period of 4-12 months.^{3,6,7,9-11}

Pharmacological agents like prednisone,^{2,12} prednisolone,^{13,14} estrogen-progesterone preparations¹³ have been used with various success rates. Octreotide was not shown to be effective.¹⁵

In conclusion, Watermelon stomach is an increasingly recognisable cause of persistent acute or occult gastrointestinal bleeding, especially in elderly women. Usually presenting as severe iron deficiency anaemia and occult or overt gastrointestinal blood loss. Diagnosis is endoscopic, with characteristic appearance of watermelon like linear stripes in antrum. Histology is rarely needed to confirm the diagnosis. The important thing is to recognise the characteristic lesion and carry out appropriate endoscopic procedure, leading to healing of the lesion with significant improvement in the anaemia and a reduction in the need for blood transfusions.

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