Clinical Challenge 5:

A 15-year-old girl had emergency upper GI endoscopy when she had presented with 3-week history of worsening dyspnoea on exertion and passing dark stools. She is known to the Diabetic team in the hospital with Type 1 diabetes mellitus, which was diagnosed about 8 years ago. The diabetes control was not very good for a long period of time and she is on intermittent insulin regime. She is awaiting an appointment for elective upper GI endoscopy following a referral from the diabetic team because her annual monitoring blood tests showed elevated coeliac serology (TTG 45). She did not have any specific gastrointestinal symptoms.

Physical examination showed pallor without any clubbing or jaundice. There were no features of heart failure. Abdomen was soft without tenderness to palpation. No mass were palpable on abdominal examination. Blood tests showed severe anaemia with a haemoglobin of 53 g/L and a haematocrit of 18.2%. The iron profile revealed an iron of 46 µg/dL, and transferrin saturation of 11.7%. Platelet count and clotting profile, renal and liver function tests and amylase were normal. The patient was kept nil by mouth and started on IV fluid and IV Omeprazole. She had received one unit of blood transfusion prior to endoscopy.

An acute gastric ulcer was noted within a dependent portion of the fundus. The ulcer was not actively bleeding and had an abnormal shiny metallic quality; as if it were stained. The apparent staining did not wash with repeated flushing. Rest of the appearance of stomach and oesophagus was normal. Duodenal villi appeared blunted. Biopsies were taken from edge of the gastric ulcer, gastric antrum, gastric body and duodenum.

Some more information is available on this case.

She had reported to GP about dyspepstic symptoms and abdominal fullness few months ago and GP has started her on Omeprazole, Domperidone and iron supplementation. She was not very regular in taking these medications and her symptoms did not improve significantly. She had remained well during her inpatient stay. There was no recurrence of GI bleeding. Her duodenal biuopsy confirmed coeliac disease. Her gastric biopsy results are available.

What is the cause of this patient's gastric ulcer?

Answer to Clinical Challenge 5

This patient had delayed gastric emptying due to autonomic dysfunction secondary to long standing uncontrolled Diabetes Mellitus. The iron tablets caused the mucosal injury which resulted in the gastric ulcer. The gastric ulcer biopsy confirmed iron deposition.

Congratulations to Dr Mashood Ayaz from Redditch and Haitham Abdul- Eis from Brighton for getting the correct answer.