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UNEXPECTED FINDINGS DURING BARIATRIC SURGERY



CASE PRESENTATION

- ⊙ 28 y.o. female
- ⊙ Morbid obesity- BMI 42
- ⊙ 2014- evaluation before bariatric surgery

Results:

- ⊙ Abdominal US – normal
- ⊙ Barium swallow – normal
- ⊙ C-13 urea breath +

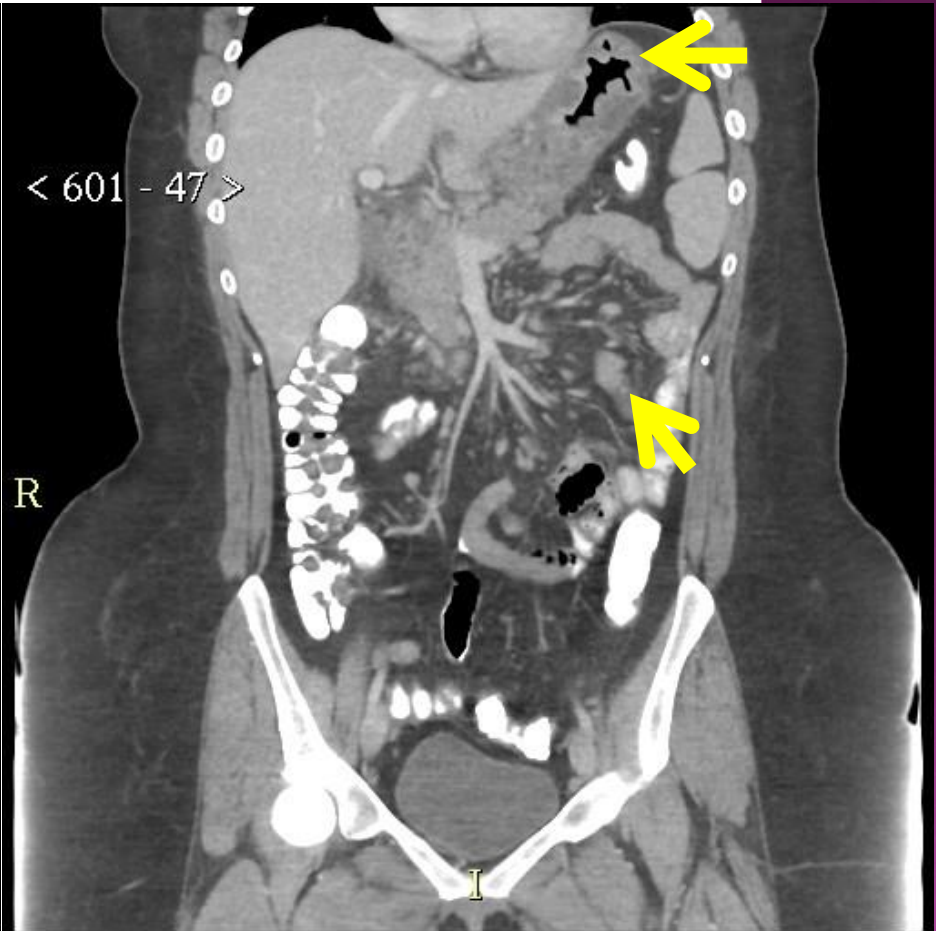
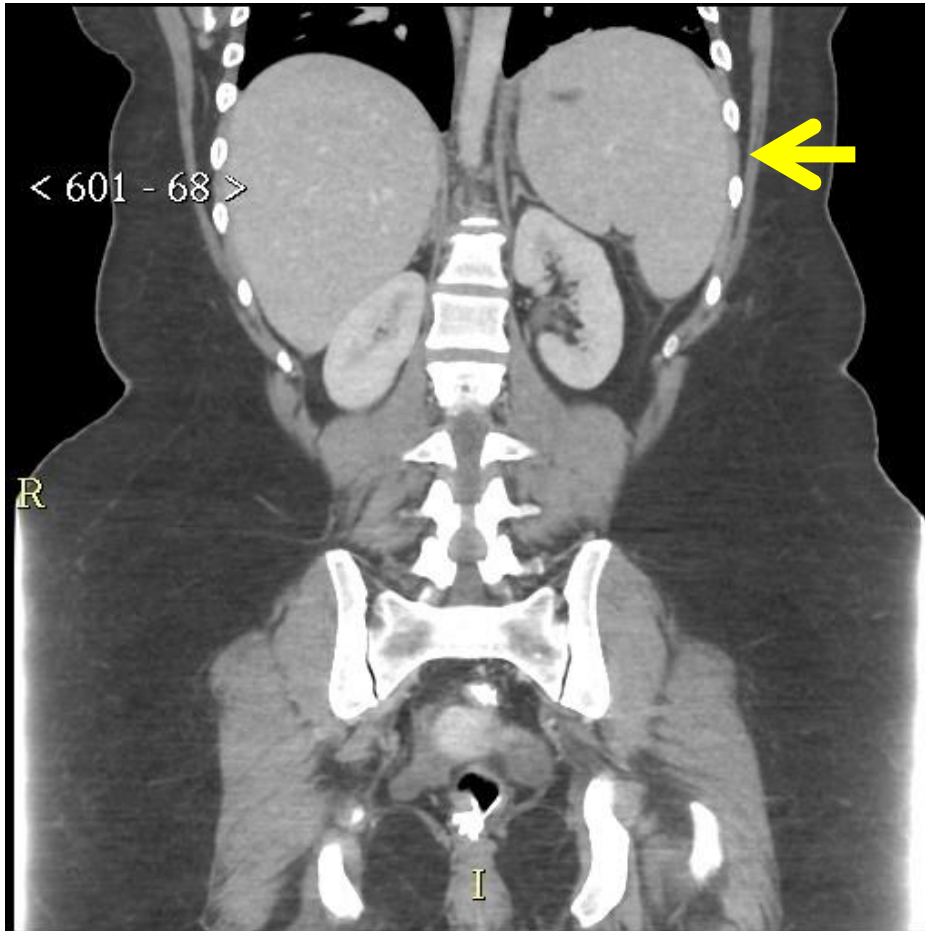
CASE PRESENTATION

Laparoscopic bariatric surgery 08/15:

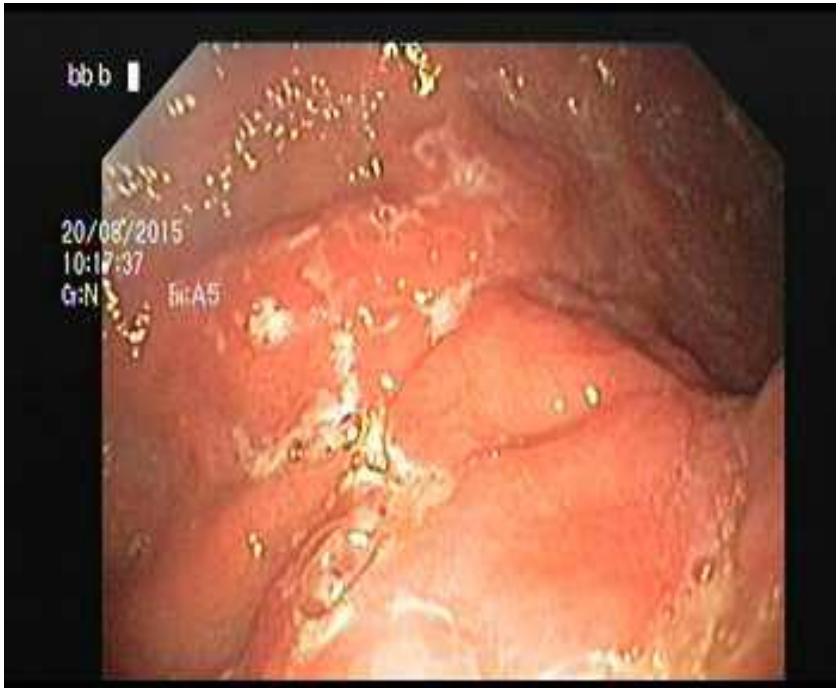
Findings:

- ⊙ Tumor-like lesion- greater curvature of stomach
omental cake; Small amount of turbid ascites
- ⊙ Ovaries & liver- appear normal
- ⊙ Biopsies taken from the omentum & tissue mass;
operation stopped

ABDOMINAL CT (NEXT DAY)



GASTROSCOPY (A DAY LATER)



??????????

QUESTIONS

What are the current recommendations for preoperative evaluation of bariatric surgery candidates?

1. Endoscopic evaluation before surgery
2. Preoperative testing and eradication of *H. pylori*



THE ROLE OF ENDOSCOPY BEFORE BARIATRIC SURGERY

- ◉ Preoperative EGD can identify asymptomatic anatomic findings that may alter surgical planning
- ◉ Patients with GI symptoms should have an upper GI endoscopic evaluation before bariatric surgery
- ◉ The presence of a hiatal hernia and endoscopic signs of reflux esophagitis - **relative contraindication** because of increased risk of new GERD-type symptoms and esophagitis after surgery
- ◉ Helicobacter pylori infection is present in 23% to 70% of patients scheduled for bariatric surgery.
- ◉ There are conflicting data for preoperative testing and treatment of H pylori with respect to related surgical outcomes,

QUESTION

Prevalence of gastric pathology during bariatric surgery



GASTRIC HISTOPATHOLOGY IN PATIENTS UNDERGOING SLEEVE GASTRECTOMY

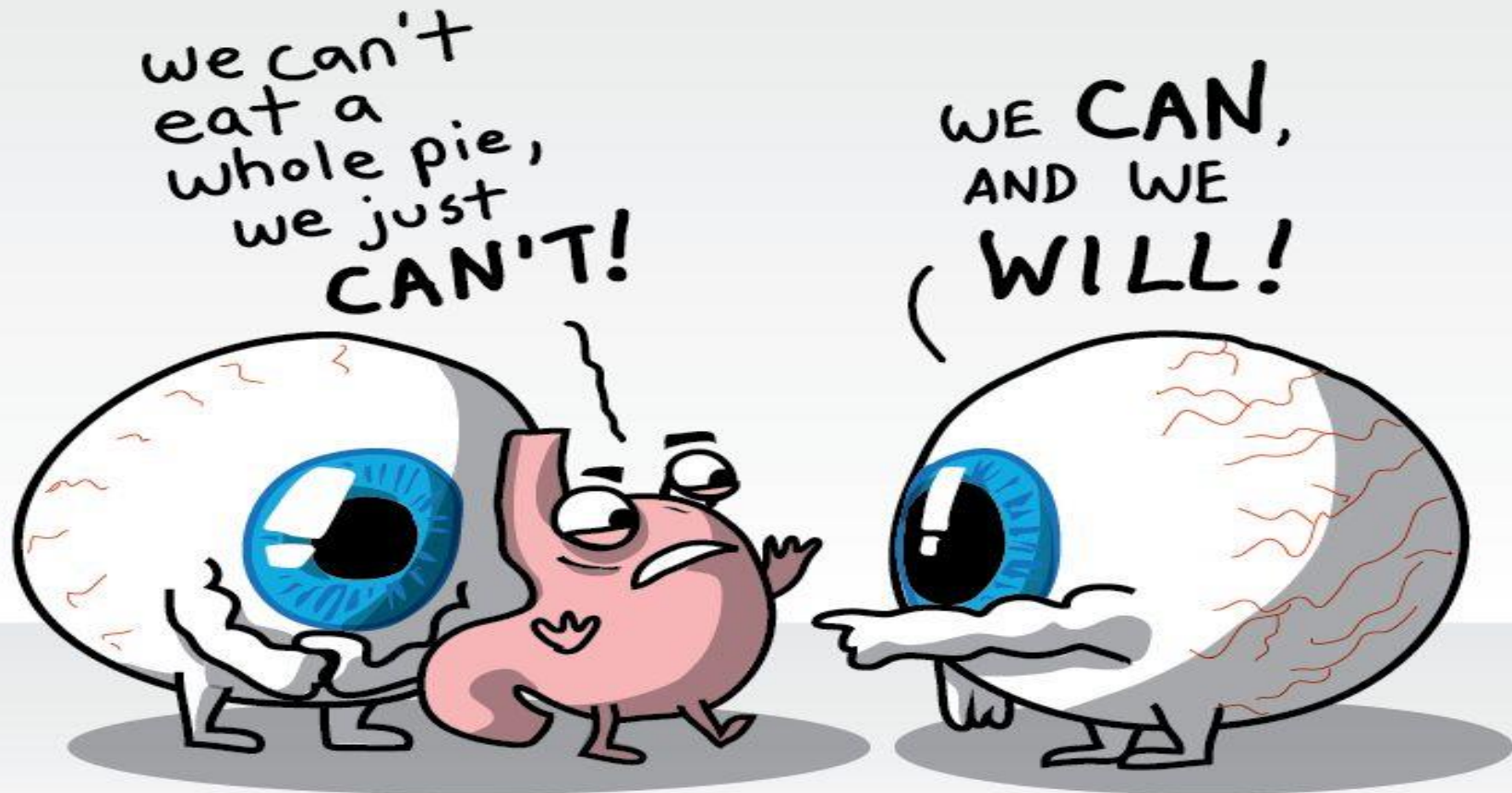
Pathology	Patients, n (%)
Chronic gastritis	488 (74.4)
Active chronic gastritis	49 (7.5)
Follicular gastritis	63 (9.6)
Active follicular gastritis	32 (4.9)
Atrophic gastritis	12 (1.8)
Gastric polyp	4 (0.6)
Granulomatous disease	3 (0.5)
GIST	1 (0.2)
GANT	1 (0.2)
Intestinal metaplasia	1 (0.2)
Collagenous gastritis	1 (0.2)
Crypt cell apoptosis	1 (0.2)

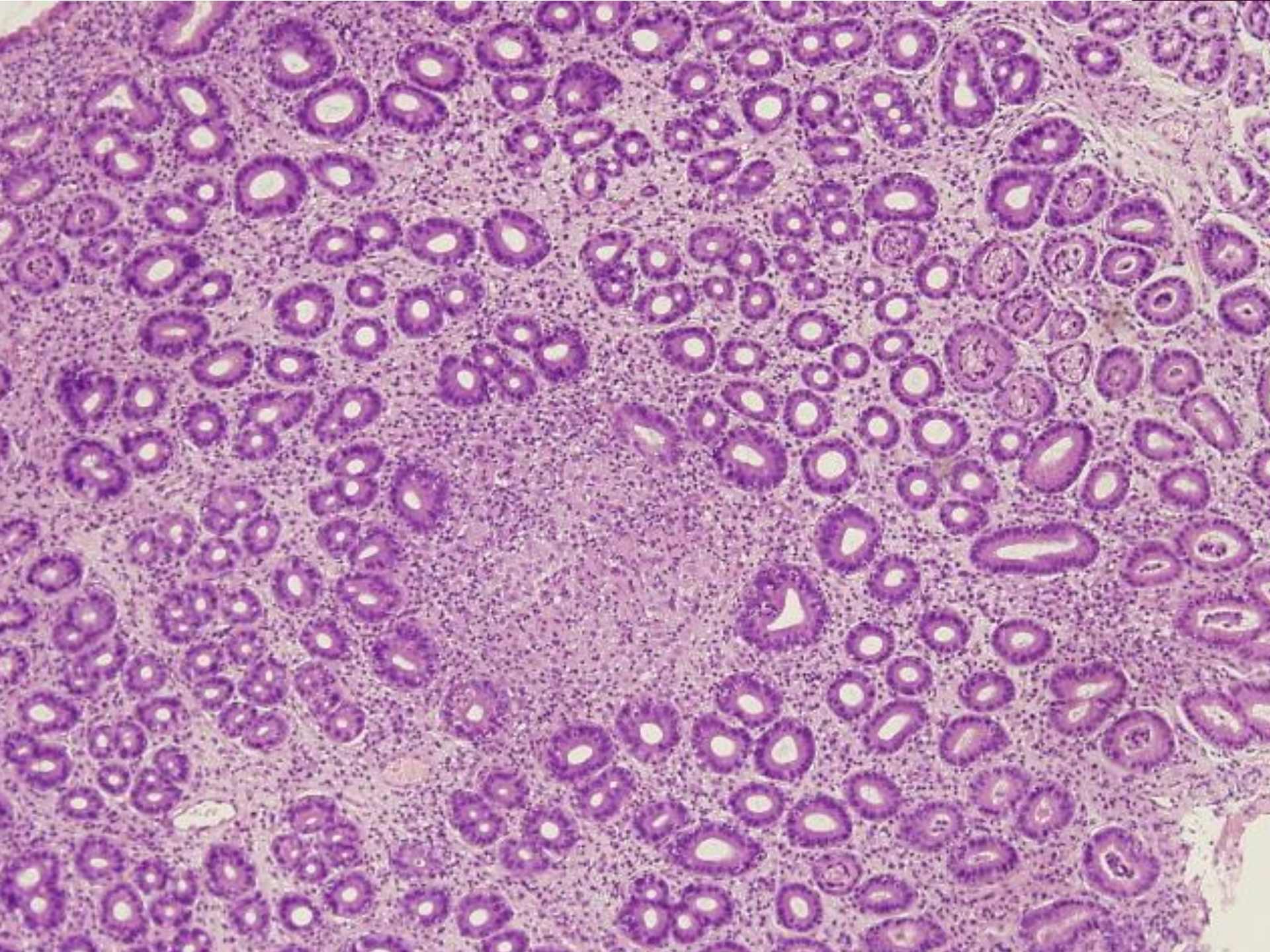
NPA, 214 (69%)
CHRONIC GASTRITIS, 41 (13%)
FUNDIC GLAND POLYP, 17 (5.5%)
PPI EFFECT, 12 (3.9%)
H.PYLORI POSITIVE, 10 (3.2%)
ACTIVE GASTRITIS, 5 (1.6%)
INTESTINAL METAPLASIA, 4 (1.3%)
GIST, 3 (1.0%)
GRANULOMATOUS INFL, 1 (0.3%)
HYPERPLASTIC POLYP, 1 (0.3%)
ULCERATION, 1 (0.3%)
XANTHOGRANULOMATOUS INFL, 1 (0.3%)

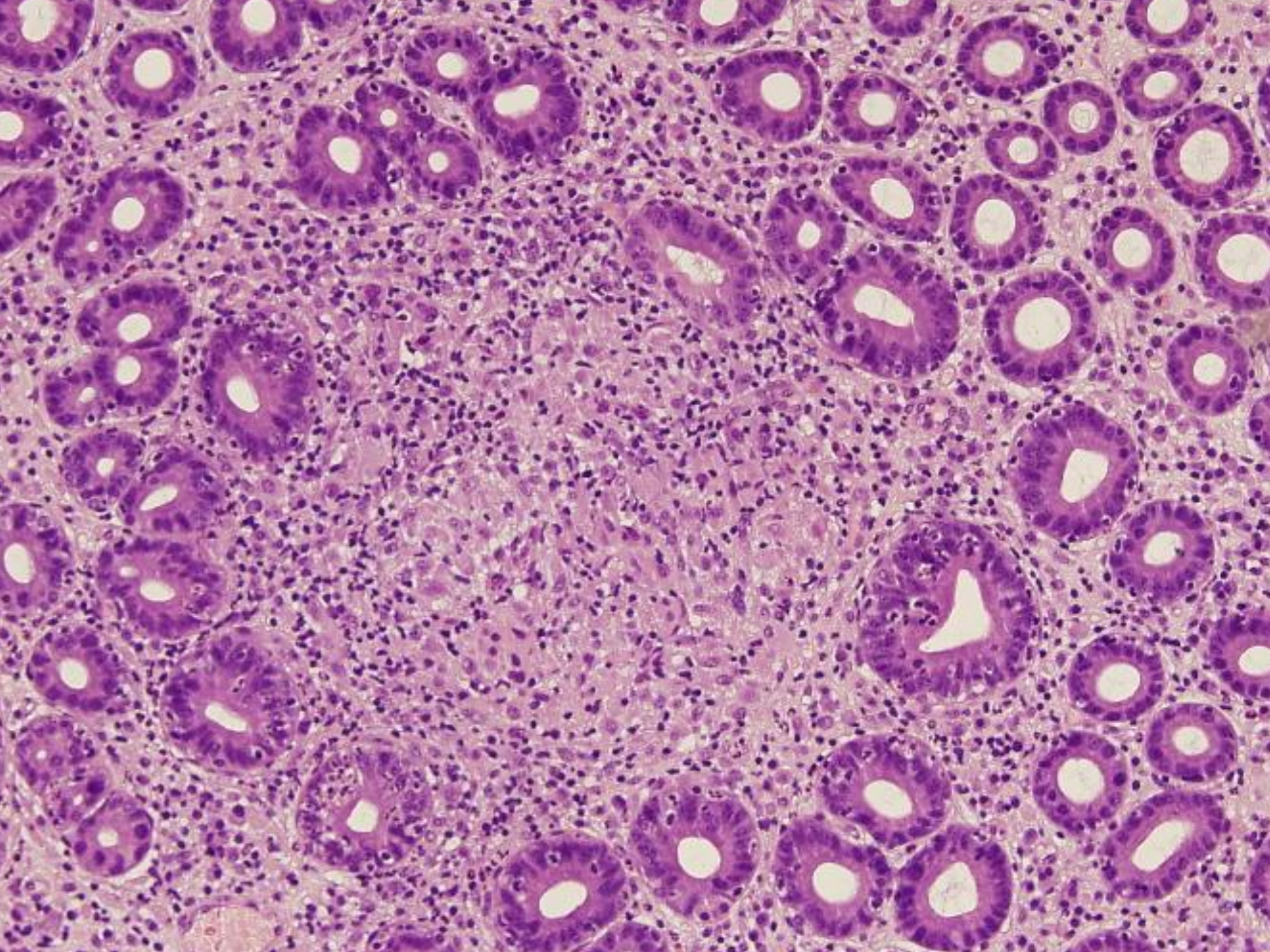
Almazeedi, et al. Gastric Histopathologies in Patients Undergoing Laparoscopic Sleeve Gastrectomies. OBES SURG. 2013

Ohanessian, et al. Spectrum of Gastric Histopathologies in Severely Obese American Patients Undergoing Sleeve Gastrectomy. OBES SURG.2015

CASE PRESENTATION







GRANULOMATOUS GASTRITIS

Infectious

- **Tuberculosis**
- Fungal:
- Histoplasmosis, etc.
- Leprosy
- Schistosomiasis
- Syphilis
- Whipple's disease
- H.Pylori

Neoplastic

- **Lymphomas**
- Solid neoplasia

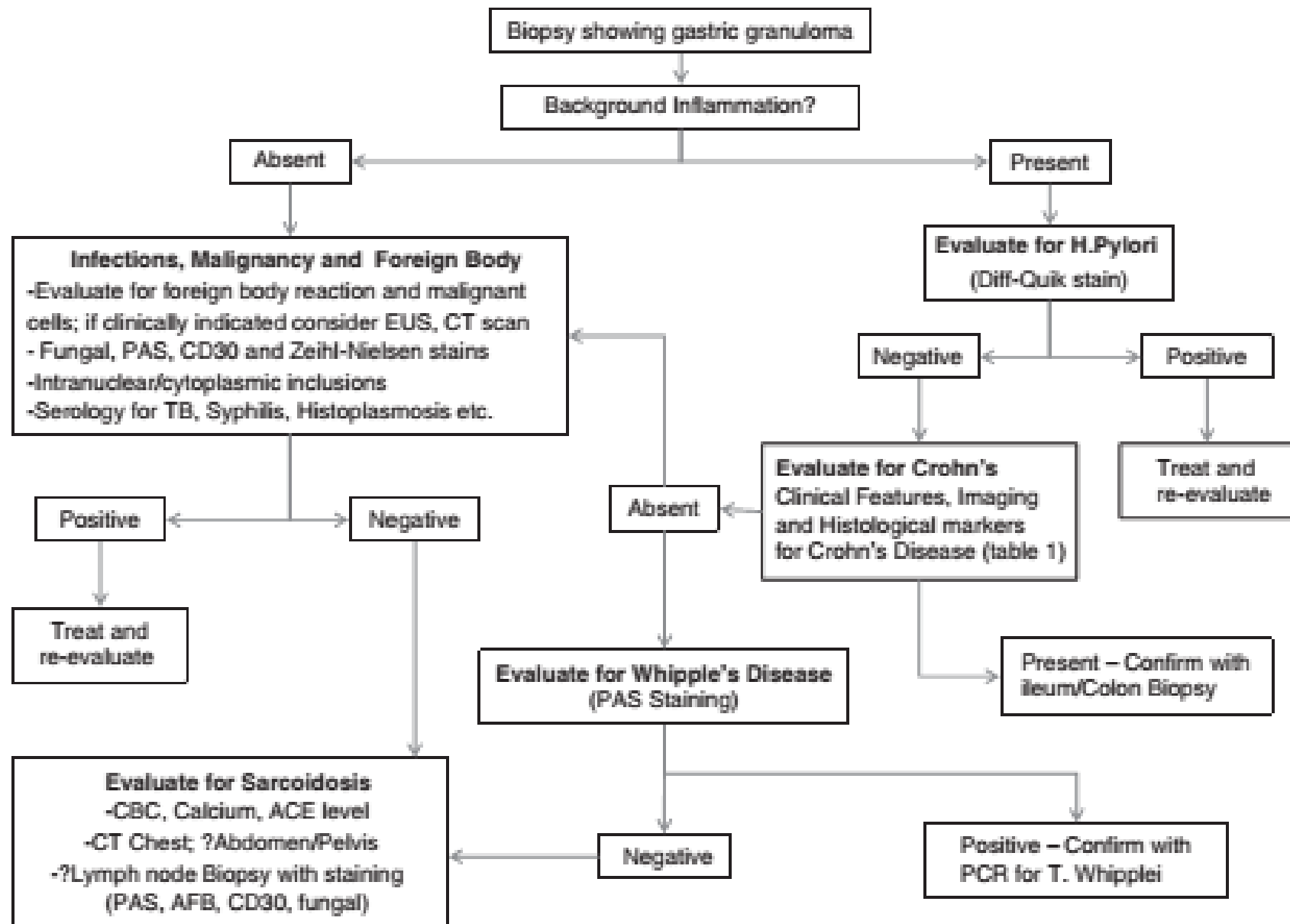
Autoimmune

- **Sarcoidosis**
- **Crohn's disease**
- Wegener's disease
- Chug-Strauss Syndrome

Other

- Drugs
- Foreign body granuloma

DIFFERENTIAL DIAGNOSIS



CASE PRESENTATION

◉ Past medical history

- 2004- diagnosed with APS → Coumadin Rx
- 2011- Erythema Nodosum → Prednisone Rx

CASE PRESENTATION

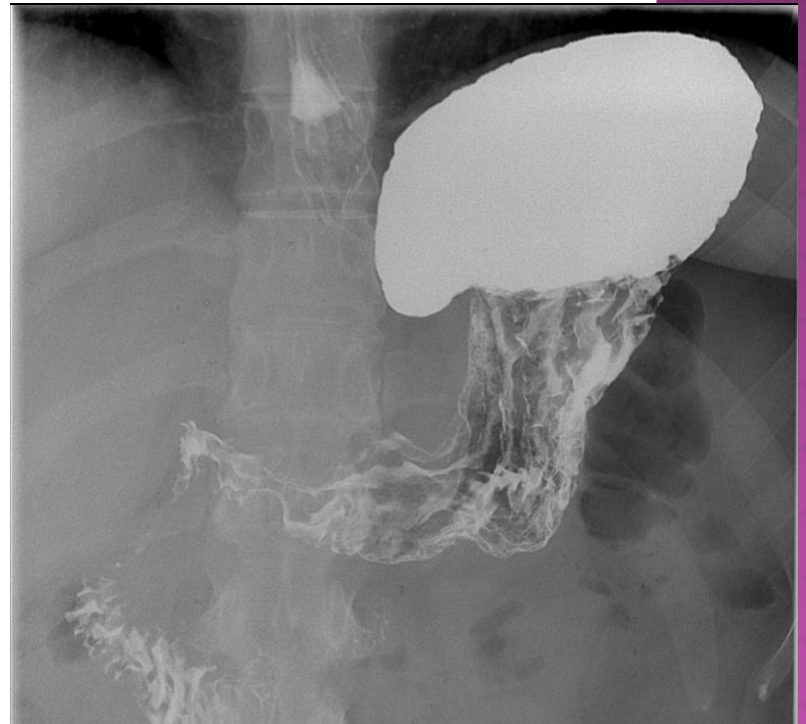
1M before surgery :

- ⊙ Repeated US – spleen enlarged 15 cm
- ⊙ Blood test (07/15):

HB	MCV	MCH	RDW	AST	ALT	ALP	GGT	Alb	CRP
9.8	65	20	15	64	59	132	60	4.3	NA

FURTHER INVESTIGATIONS

- 1) Revision of biopsy: no signs of LY
- 2) Hematologic consultation – no need for BMB
- 3) Tissue culture – negative for TB
- 4) ACE level 63U/l (N)
- 5) Ca- 9 mg/dL (N)
- 6) HP eradication done
- 7) Barium swallow – 2nd look



FINAL DIAGNOSIS:

SARCOIDOSIS

- Gastrointestinal manifestation (Granulomatous gastritis)
- Peritoneal involvement
- Lymphadenopathy
- Splenomegaly
- Hepatic involvement

- Steroids- started



SARCOIDOSIS OF GI TRACT

- Sarcoidosis - a systemic non-caseating granulomatous inflammatory disease
- Can involve any organ, lung involvement - the most common.
- GI tract involvement can be isolated or part of systemic disease

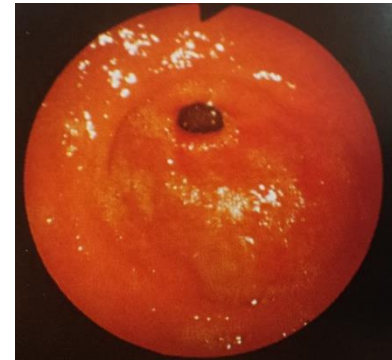
SARCOIDOSIS OF GI TRACT

- Subclinical GI tract sarcoidosis reported in **5-10%** of patients with systemic sarcoidosis
- **Symptomatic** GI involvement occurs only in **0.1 to 0.9%** of patients with systemic disease
- Gastric sarcoidosis ➡ the most common form

TYPES OF GASTRIC SARCOIDOSIS

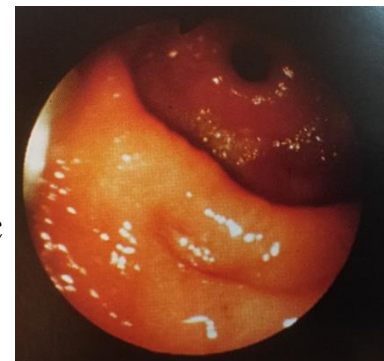
● Subclinical gastric sarcoidosis

- ❑ Most common type-asymptomatic
- ❑ Endoscopy:
 - Normal or hyperemic mucosa with superficial nodularity
 - Patchy mucosal involvement
 - Atrophic gastritis has been described



● Ulcerative gastric sarcoidosis

- ❑ Epigastric pain or UGI bleeding
- ❑ Endoscopy:
 - Ulceration throughout the stomach, mainly antral, pylorus and lesser curve
 - Gastric outlet obstruction due to pyloric ulcers



TYPES OF GASTRIC SARCOIDOSIS

● Infiltrative gastric sarcoidosis:

localized or diffuse

- Most common - localized infiltrative gastric sarcoidosis
- Diffuse infiltration of gastric mucosa → linitis-like appearance

● Polypoid gastric sarcoidosis

- Rare type
- Single and multiple gastric polypoid lesions have been reported

SUMMARY

- ◉ A rare manifestation of multisystem extra-pulmonary sarcoidosis was presented
- ◉ Apart from IDA the patient was asymptomatic
- ◉ Sarcoidosis is a diagnosis of exclusion once all other causes of granulomatous inflammation were ruled out

Thank You for the attention