

A TRIVIAL CASE OF DIARRRHEA AND WEIGHT LOSS...

Har-Noy Ofir

Gastroenterology department

Sheba Medical Center



CASE PRESENTATION:

48 y.o, m+1. ancestry: Iraq.

No relevant medical background.

Family history:

- Brother & father: “Abdominal problem”

CASE PRESENTATION:

History of present illness:

Few months of infrequent abdominal pain (once /4 days)

- Relieved by defecation.

Diarrhea x4/day, watery.

Rare vomiting.

5 Kg weight loss (58 -53 kg).

B12 deficiency– was started on B12 S.L. (by the primary physician).

Differential diagnosis???

- Bacterial toxins / parasites (Diphyllobothrium)
- IBD
- NET, Lymphoma
- Rx (metformin, PPI)
- Vasculitis
- Carbohydrate malabsorption
- IBS

CASE PRESENTATION:

Physical examination:

- Pale, cachectic, temporal wasting.
- mild epigastric tenderness.
- Neurological examination: cognitive decline, unsteady gait, peripheral facialis (Lt)

Lab:

- Hb=8.8 g/dl (indexes: micro/hypo)
- Iron<11 mcg/dl
- Albumin=2.3 g/dl
- Na=130 meq/L
- CRP=72 (0-5) mg/L

IN SUMMARY:

- Abdominal pain, diarrhea.
- weight loss.
- cognitive decline.
- unsteady gait.
- Combined anemia (iron+ B12)
- hypoalbuminemia.

DIFFERENTIAL DIAGNOSIS:

- **Infectious (HIV? Syphilis?)**
- **IBD? Celiac?**
- **NET, Lymphoma**
- **Rx/ Toxins (Cocaine?)**
- **Vasculitis (Behcet? SLE?)**
- **Adrenal insufficiency?**

INVESTIGATIONS:

anti- endomysial Ab's: negative

ANCA, C3, C4: normal.

Thiamin level: normal.

INVESTIGATIONS:

Abdominal CT:

infiltration of the mesentery. Enlarged lymph nodes up to 10 mm.
thickening of small-bowel mucosa.

Brain CT:

peripheral atrophy.

INVESTIGATIONS:

EGD:

Normal gastroscopy.

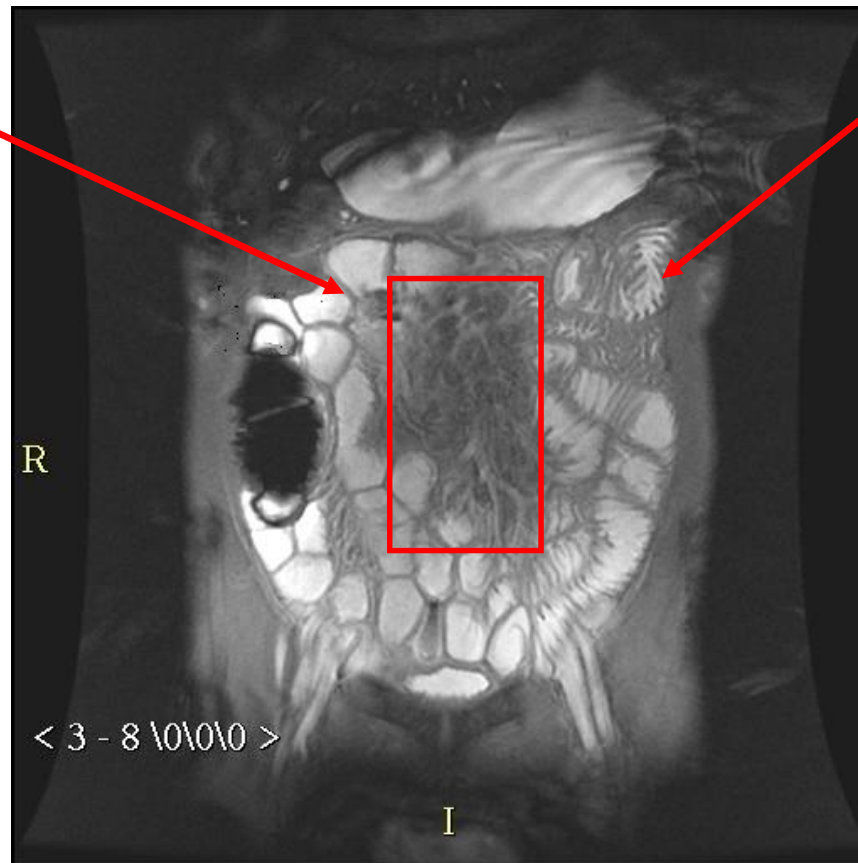


INVESTIGATIONS:

MRE:

Mesenteric infiltration

proximal jejunum disease

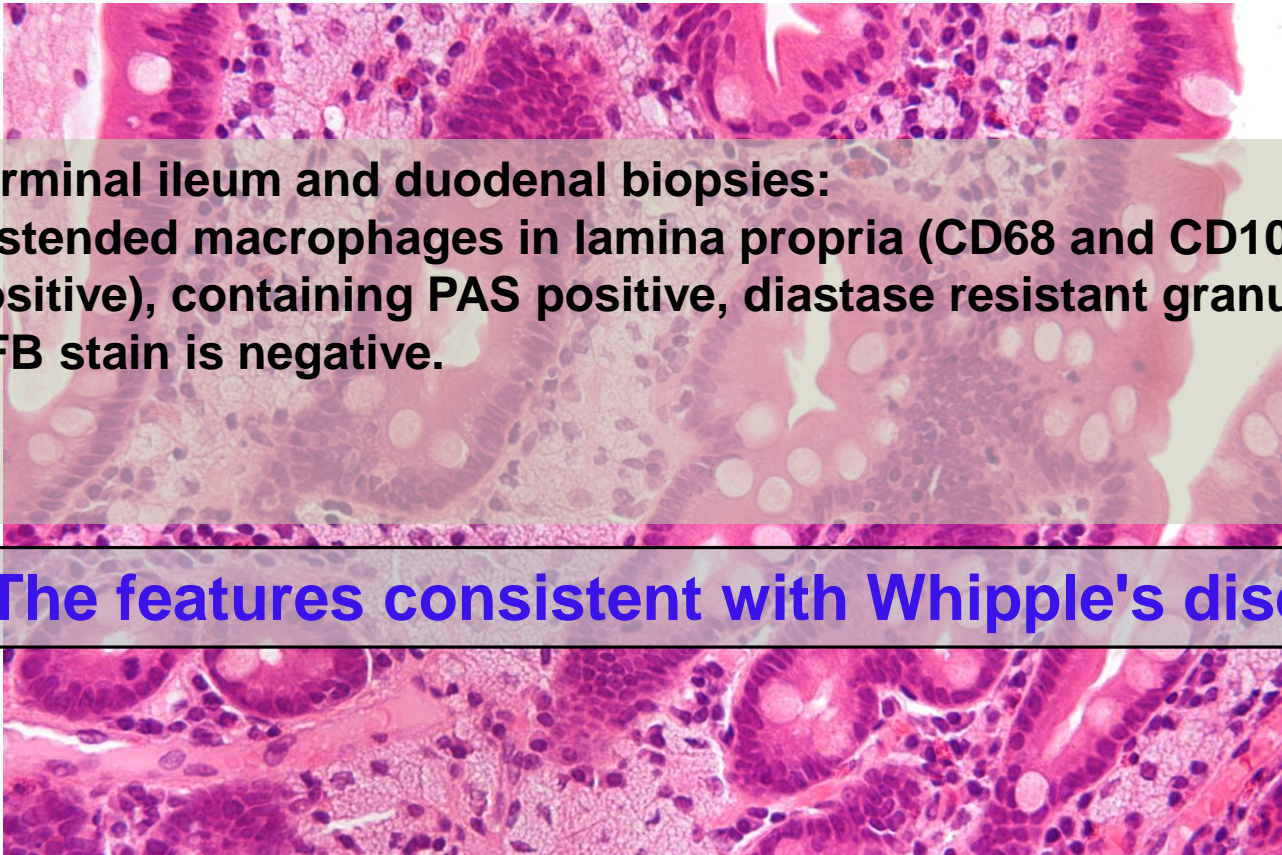


COLONOSCOPY: NORMAL APPEARING COLONIC MUCOSA...

Terminal ileum:



PATHOLOGY:



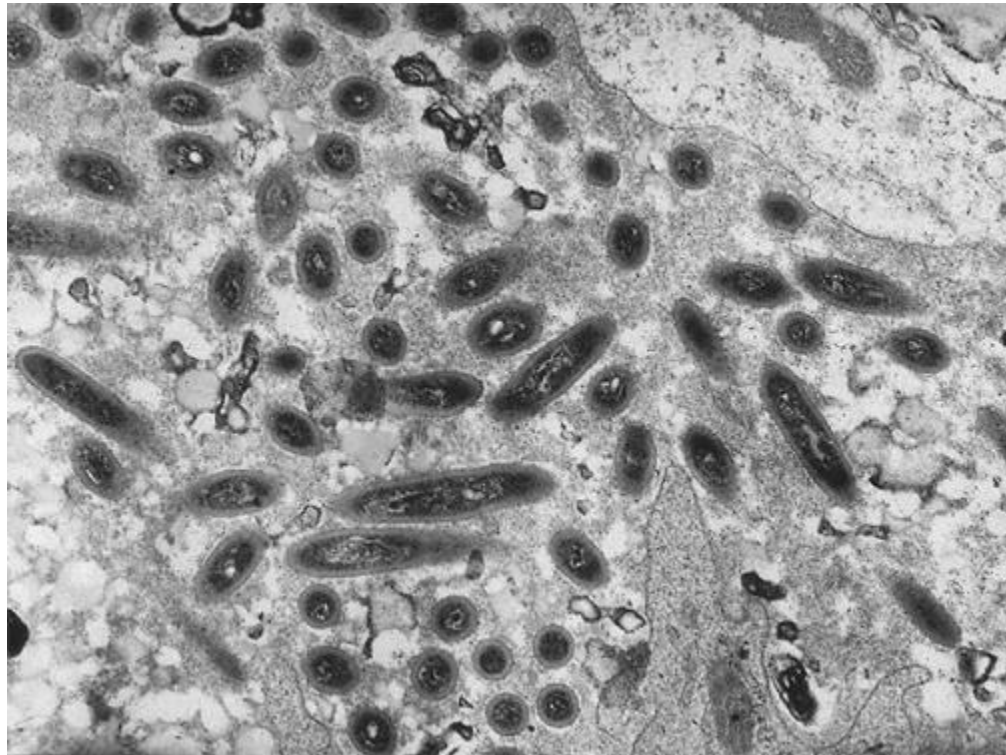
Terminal ileum and duodenal biopsies:
Distended macrophages in lamina propria (CD68 and CD10 positive), containing PAS positive, diastase resistant granules.
AFB stain is negative.

The features consistent with Whipple's disease.

WHIPPLE'S DISEASE:

An infectious disease caused by “*Tropheryma Whipplei*”

A gram (+), PAS (+) bacillus



WHIPPLE'S DISEASE:

Epidemiology:

In Europe: using PCR in feces: 1-11% prevalence of adults

In children: gastroenteritis.

In adults: asymptomatic disease.

- Annual incidence of symptomatic whipple's: 30 cases/ year

Predilection for: Males, European ancestry.

Occupational exposure to soil, sewage or animals.

WHIPPLE'S DISEASE:

The bacillus can be isolated from many organs:

1. skin, intestine (small bowel, colon), blood & lymph vessels, liver, kidneys, heart valves, brain, lungs, bone-marrow.
2. impaired immune function of monocytes and macrophages.
3. Possible secondary immune deficiency imposed by the bacillus.
4. IgG Ab's against the pathogen can be found in healthy adults.

WHIPPLE'S DISEASE:

Clinical manifestations:

- Arthralgia:
 - Migratory
 - Large joints
 - May precede other manifestations by many years.
- Diarrhea & weight loss
- Abdominal pain, ascites, adenopathy
- Dementia, cerebellar ataxia, protean neurological symptoms
 - Pathognomonic:
 - continuous rhythmic movements of eye convergence with concurrent contractions of the masticatory muscles
 - oculo-facial-skeletal myorhythmia

WHIPPLE'S DISEASE:

Less common symptoms:

- Fever, skin hyperpigmentation
- Cardiac (pericarditis, culture-negative endocarditis)
- Pleuropulmonary disease
- Non-thrombocytopenic purpura

Differential diagnosis:

- Hyperthyroidism
- Connective tissue disease
- Inflammatory Bowel Disease
- AIDS

DIAGNOSIS:

Gastroscopy with small-bowel biopsies:

- **Check INR!** – vitamin-K deficiency
- PAS staining of duodenal biopsies.
 - extensive PAS-positive material in the lamina propria & villous atrophy.
 - Similar picture in HIV-associated mycobacterial infections

DIAGNOSIS:

PCR:

- Saliva, stool – lack specificity & sensitivity.
- Tissue samples – sensitive.
- Involved organs: CSF, brain, liver, cardiac valves.
- Peripheral blood – has been described.



severe involvement of the distal duodenum (D4).

Folds are low, and mucosa is swollen and grey-yellowish with multiple reddish spots (small mucosal hemorrhages).

Whipple's disease in the jejunum:



Jejunal mucosa is swollen and grey-pink with small whitish areas and multiple tiny mucosal hemorrhages



proximal jejunum. Characteristic whitish areas protrude a little the above surrounding

J. Bures et al. Gastroenterology Research and Practice Volume 2013 (2013), Article ID 478349, page 10

Isolated involvement of the terminal-ileum has been described.

Dinis-Silva J. Endoscopy 2013; 45(S 02): E59-E60

Advanced imaging:

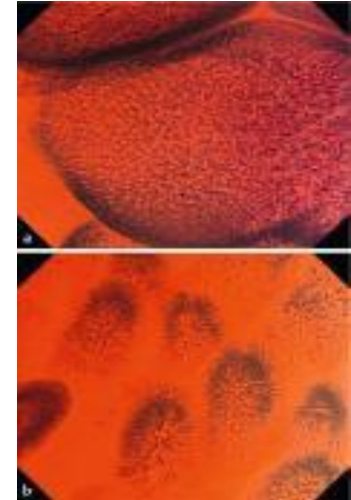
Endocystoscopy & NBI:



Conventional high definition white-light endoscopy of the second part of the duodenum



narrow band imaging of the second part of the duodenum showing elongated wide villi and loss of minute vessels inside each villus.



Endocystoscopic view of Whipple's disease in the ileum showing swollen and enlarged villi (a) ; normal ileum (b).

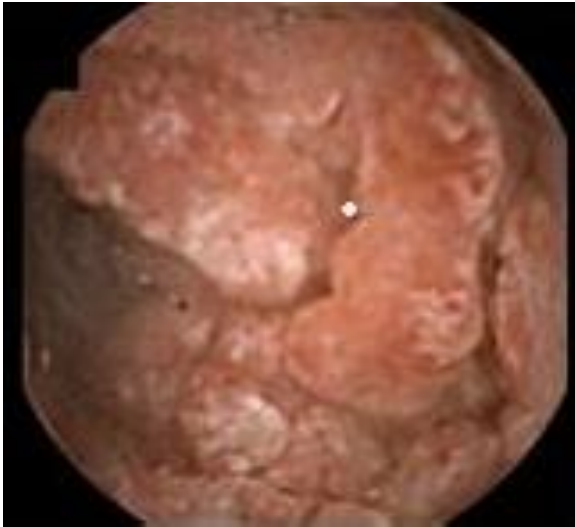


High-resolution white-light endoscopy : pale mucosa with intermittent erythematous eroded patches.

Narrow-band imaging: intestinal villi appear edematous and slightly flattened. Changes in the microvasculature-not visible.

Advanced imaging:

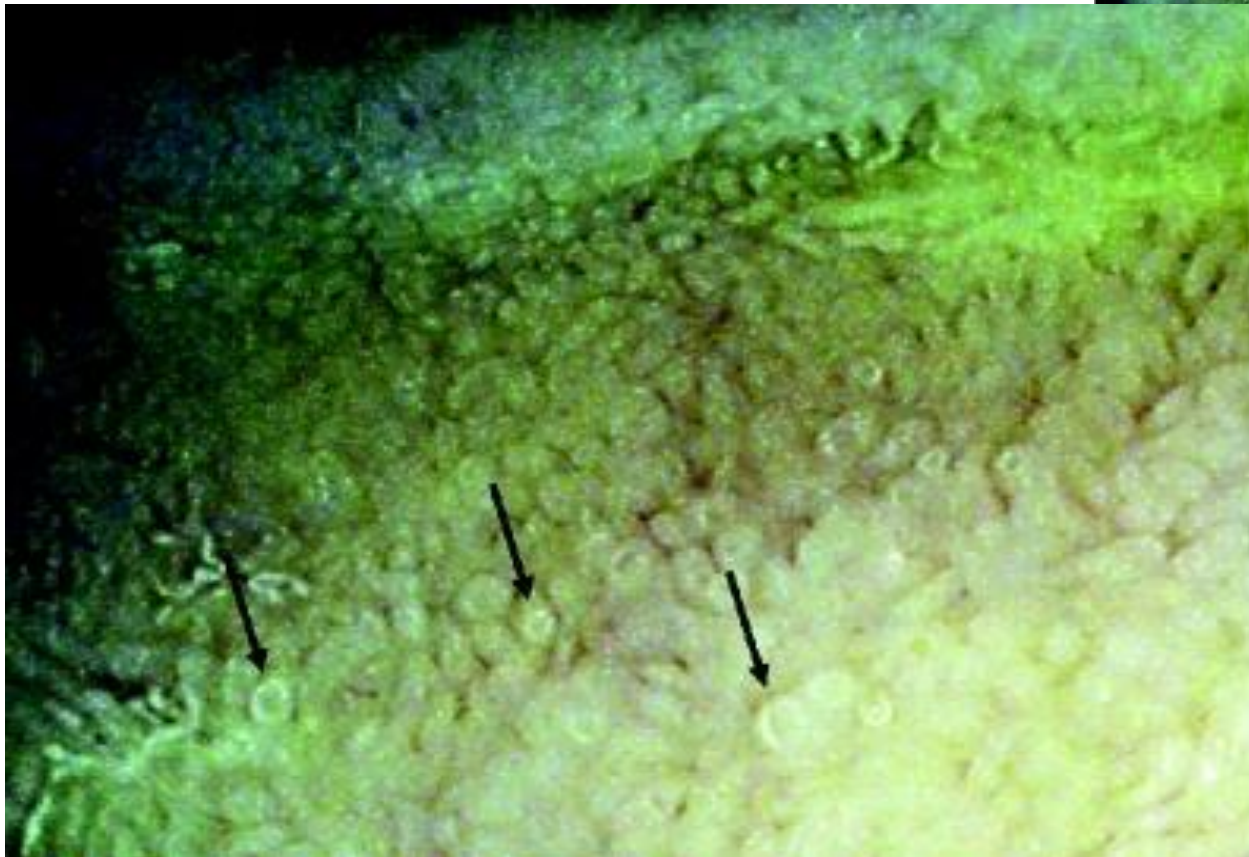
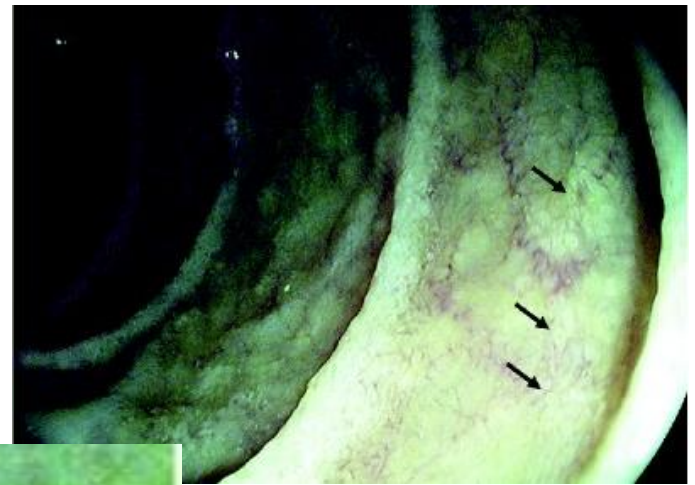
Capsule endoscopy:



diffuse erythema, edema, erosions,
and whitish plaques throughout the small bowel.

Advanced imaging:

i-SCAN:



**virtual
chromoendoscopy
with i-scan:**
white-yellowish
concentric rings inside
the villi

Treatment:

Ceftriaxone / penicillin-G:

- Usually- 14 days.
- 28 days if CNS disease or endocarditis.



Maintenance TX: TMP-SMZ for 1 year.

Outcome:

Treated patients – good prognosis

Follow-up with repeated PCR: possible option.

- No role for repeated PAS staining.

Complications:

Jarisch-Herxheimer reactions

Relapses

Immune reconstitution syndrome:

- **First few weeks of therapy**
- **Mainly in immunosuppressed, CNS disease.**

Thank you for the attention !!