

The "3rd EULAR/EUSTAR Educational Course 2009"

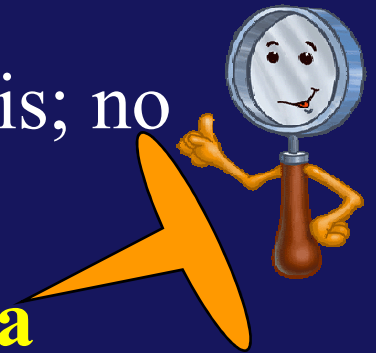
22th—25th of January 2009

Difficult cases of scleroderma: weight loss and malnutrition

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Clinical data:

- she was diagnosed **dcSSc** in 1992 based on Raynaud phenomenon and diffuse skin involvement
- 1996- : chest X-ray showed pulmonary fibrosis; no pulmonary symptoms
- **1997- : unintended weight loss and diarrhea**
- 1998- : palpitation due to cardiac involvement (supraventricular arrhythmia, diastolic dysfunction)
- 2005- : shortness of breath due to alveolitis



Symptoms:

„I am just 48, but I cannot afford to go to the city for a walk, I refuse to meet my friends for a cup of coffee, I cannot go to a movie, because I feel embarrassed. I am ashamed of telling these horrible symptoms to my colleagues, even my doctors, except you who care for scleroderma patients“

- weight loss (20 % of her total body weight, height: 182 cm, weight: 56 kg, BMI:16,9 kg/m²=underweight)
- other GI symptoms
 - diarrhea (frequency: 8-10x, mucous)
 - dysphagia (solid food)
 - hyperacidity
 - fecal incontinence

**What diagnostic procedures
would you perform in this case?**

Diagnostic procedures 1.

- physical examination: cachexia, distended abdomen with diffuse tenderness
- ESR 12 mm/h, WBC 5,6 G/L, Hb 10,2 g/dL, MCV 73 fL, serum ferritin 30 μ g/L, TIBC 397 μ g/dL, amylase 108 U/L, lipase 130 U/L, serum albumin 3,4 g/dL
- occult fecal blood test: **negative**
- stool culture: **negative**
- urinary d-xylose test: <4 g; positive **→ malabsorption**

Diagnostic procedures 2.

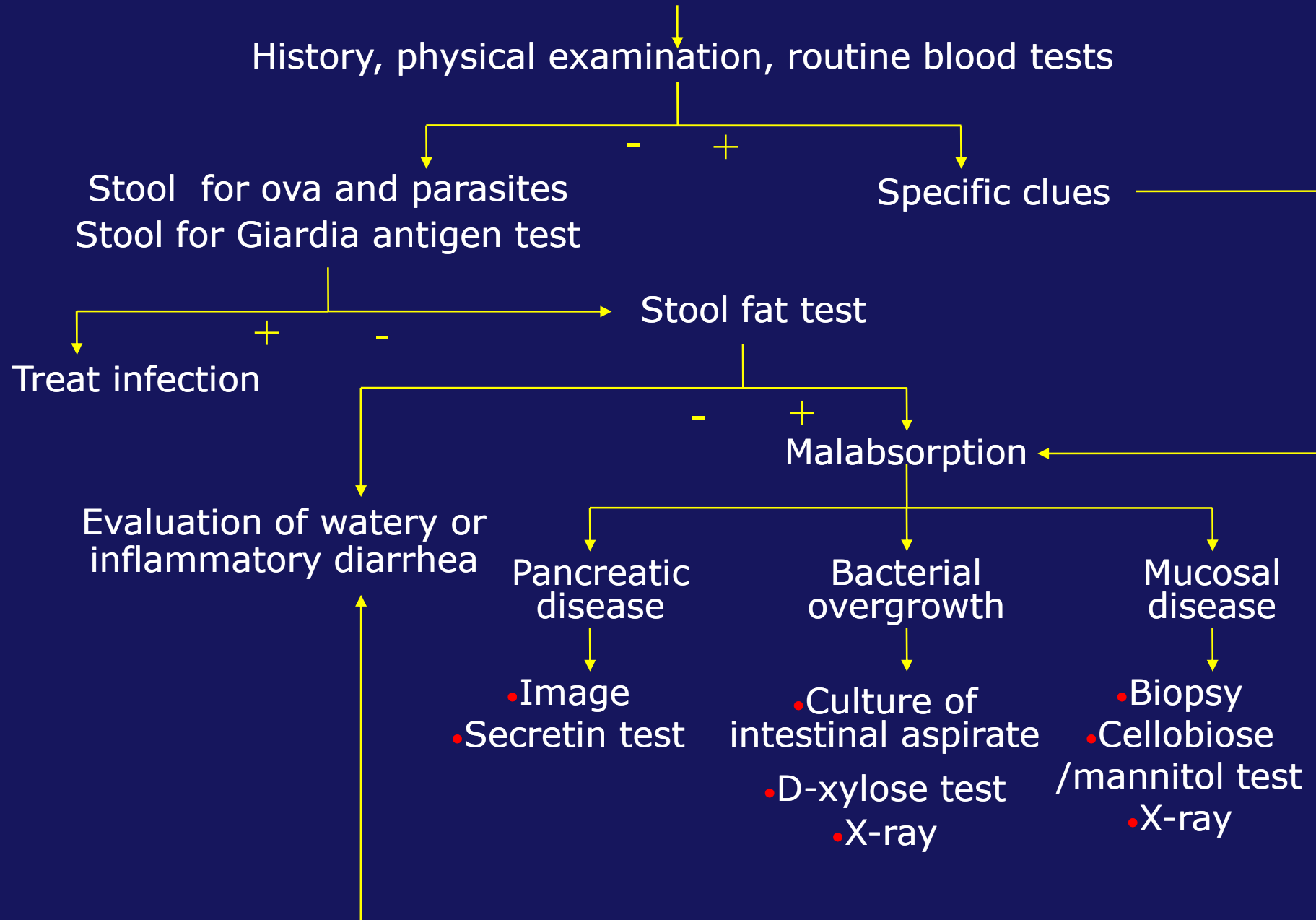
- abdominal ultrasound: atrophic pancreas, large amount of secretum in small intestine
- barium meal: dilated esophagus with aperistalsis, slow peristalsis of the ventricular wall
- 24 hour pH metry: acid reflux at night
- gastroscopy: reflux esophagitis, Helicobacter pylori positivity
- jejunoscopy: absent or flattened duodenal and jejunal folds, biopsy specimen was taken (fibrosis of the intestinal wall, or anything else?)
- rectoscopy: normal mucosa, lax anal sphincter
- anorectal manometry: absent recto-anal inhibitory reflex, decreased resting and squeeze pressure in the anal canal

**What caused the weight loss
and malnutrition?**

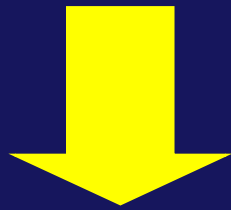
Diagnosis

- hypomotility of the GI tract and malabsorption
- reflux esophagitis and H.pylori associated gastritis
- impaired recto-anal sphincter function

Unintended weight loss and chronic diarrhea



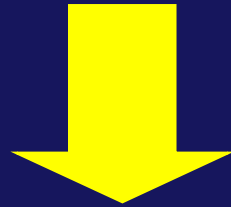
Gold standard for the evaluation of malabsorption



Quantitative stool fat test:

- ❖ Ingestion of a high-fat diet (100 g) for 2 days before collection
- ❖ Stool collection for 3 days
- ❖ Positive result: $> 7 \text{ g/24 h}$

Generally used test for the evaluation of bacterial overgrowth

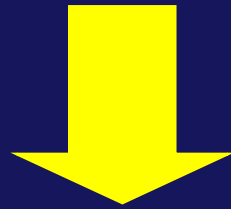


D-Xylose absorption test:

- ❖ Ingestion of 25 g of D-xylose
- ❖ 5 hours urine collection
- ❖ Blood sample collection after 1 hour
- ❖ **Positive results:** < 4 g of xylose (urine)
< 20 mg of xylose (blood)

Easy, unexpensive *but* affected by renal impairment and altered intestinal transit. **Gold standard:** culture of small bowel aspirate

Other tests for the evaluation of bacterial overgrowth





- ❖ H₂-lactulose breath test
- ❖ H₂-glucose breath test
- ❖ ¹⁴C (or ¹³C) -Xylose breath test

Not always available. Sensitivity and specificity up to 90 %
similar to the gold standard

What therapy would you initiate?

Our therapy

- **prokinetics** (3x10 mg metoclopramide)
- **PPI** (30 mg of lansoprazole) 
- **antibiotics** (2x400 mg rifaximin for 7 days and 3x625 mg amoxicillin+clavulanic acid for another 7 days)
- **recto-anal stimulation** (electric device)
- **total parenteral nutrition** for a 10 days period




 To treat bacterial overgrowth proton pump inhibitors should be avoided, if possible!

Antibiotic therapy

- Tetracycline 250-500 mg x 4/daily
- Ciprofloxacin (or other quinolone) 500 mg x 2/daily
- Amoxicillin/clavulanic acid 625 mg x 3/daily
- Cephalexin 250 mg x 4/daily + metronidazole 250 mg 3/daily
- Rifaximin 400 mg x 2/daily

Antibiotic therapy is usually **EMPIRIC** and should be given for 14 days at least. **CYCLIC TREATMENT** (1 week out of every 4 weeks) with rotating drugs is useful to prevent recurrency.

Prokinetic therapy

- Dopamine antagonists  domperidone 10 mg x 3/daily
- Motilin agonists  erythromycin 250-500 mg x 3/daily
- Somatostatin agonists  octreotide 50-100 µg/daily

Octreotide has been proven to be effective both in the treatment of bacterial overgrowth (50 µg/daily), and in the treatment of severe dysmotility itself (100 µg/daily).

The safety of a long term octreotide administration has been demonstrated.

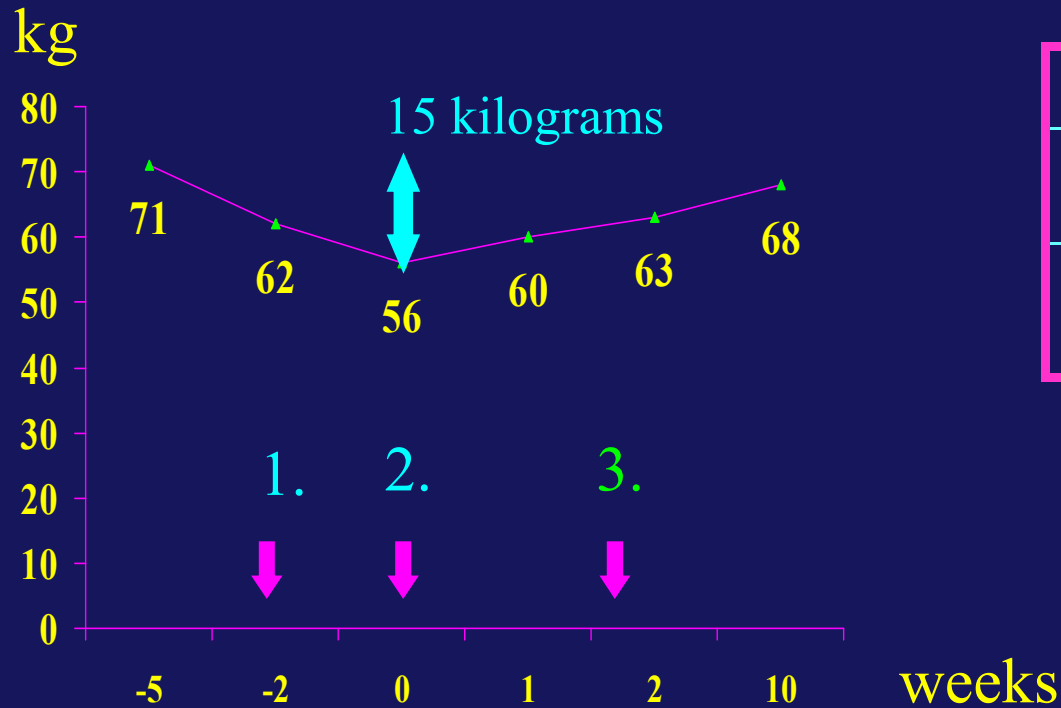
Recently, the improvement of small intestinal disease in scleroderma patients has been obtained by long term use of i.m. long-acting-release octreotide 20 mg/m.

Remember:

**an adequate nutritional support,
including vitamin supplementation,
is essential to reach both a good
global outcome and the control of
bacterial overgrowth**

Results

- her nutritional status had improved



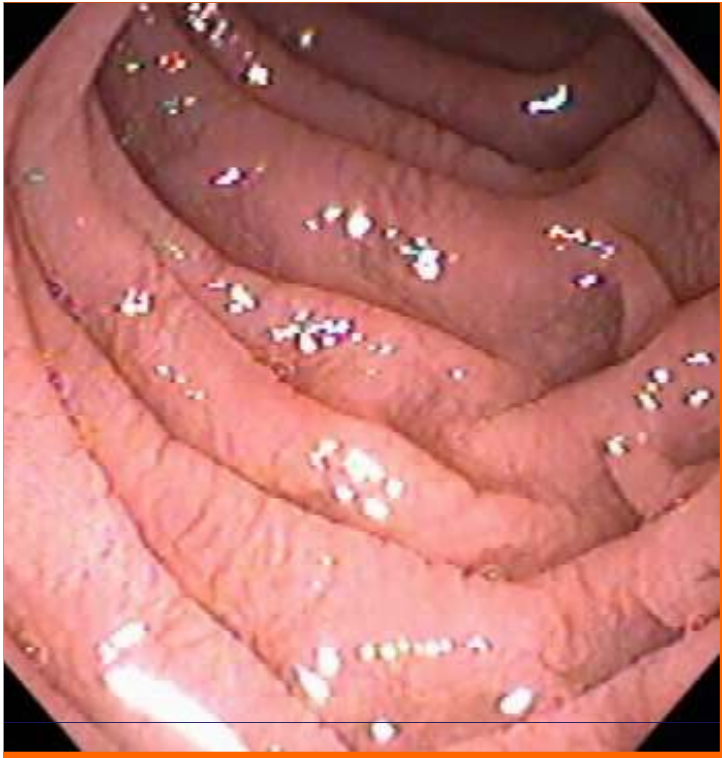
	week -2	week 10
Hgb (g/dl)	10.2	11.0
Serum albumin (g/dl)	3.4	4.2

1. time of hospitalization
2. start of TPN
3. in possession of the histologic findings: ???

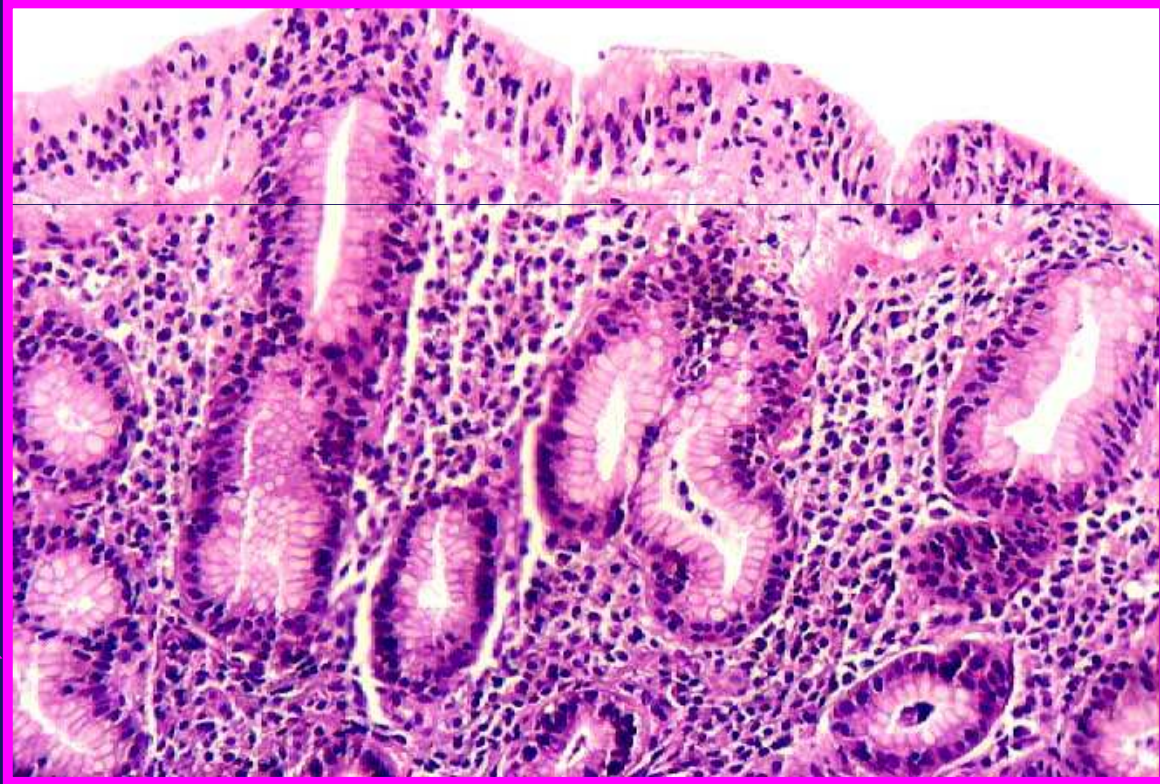
- no other complications appeared
- but no distinct improvement in fecal incontinence until now

One more diagnostic finding!

endoscopic picture of small intestine



biopsy specimen of small intestine (hematoxylin-eosin)

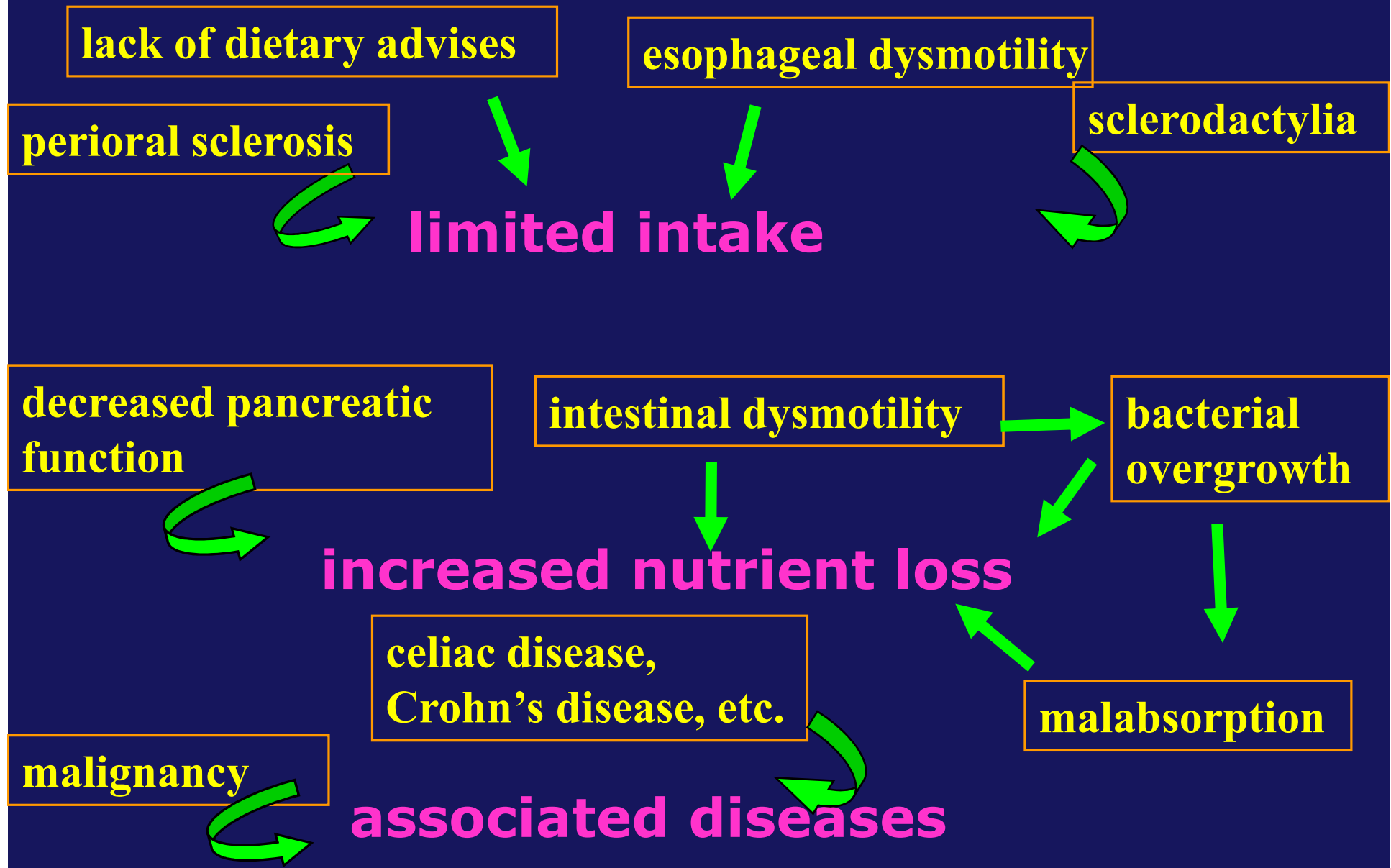


IgA anti - endomysial antibody positivity

???

Gluten - free diet

POSSIBLE CAUSES OF WEIGHT LOSS in scleroderma:





Take home messages

- malnutrition, diarrhea and weight loss is usually due to scleroderma, but we have to check other reasons as well
- we have to make an effort to do more specific diagnostic procedures
- celiac disease associated with systemic sclerosis is a rare overlap syndrome
- is it an overlap or coexistence?

Few publications:

J.A. Gomez-Puerta /Annals of the Rheumatic Diseases 2004/:

- 6 well documented cases, mostly women
- 50 % of them had associated Sjögren's syndrome
- HLA DR3-DQ2 haplotype (in Sjögren's syndrome and celiac disease)