د – مشتاق وتوت

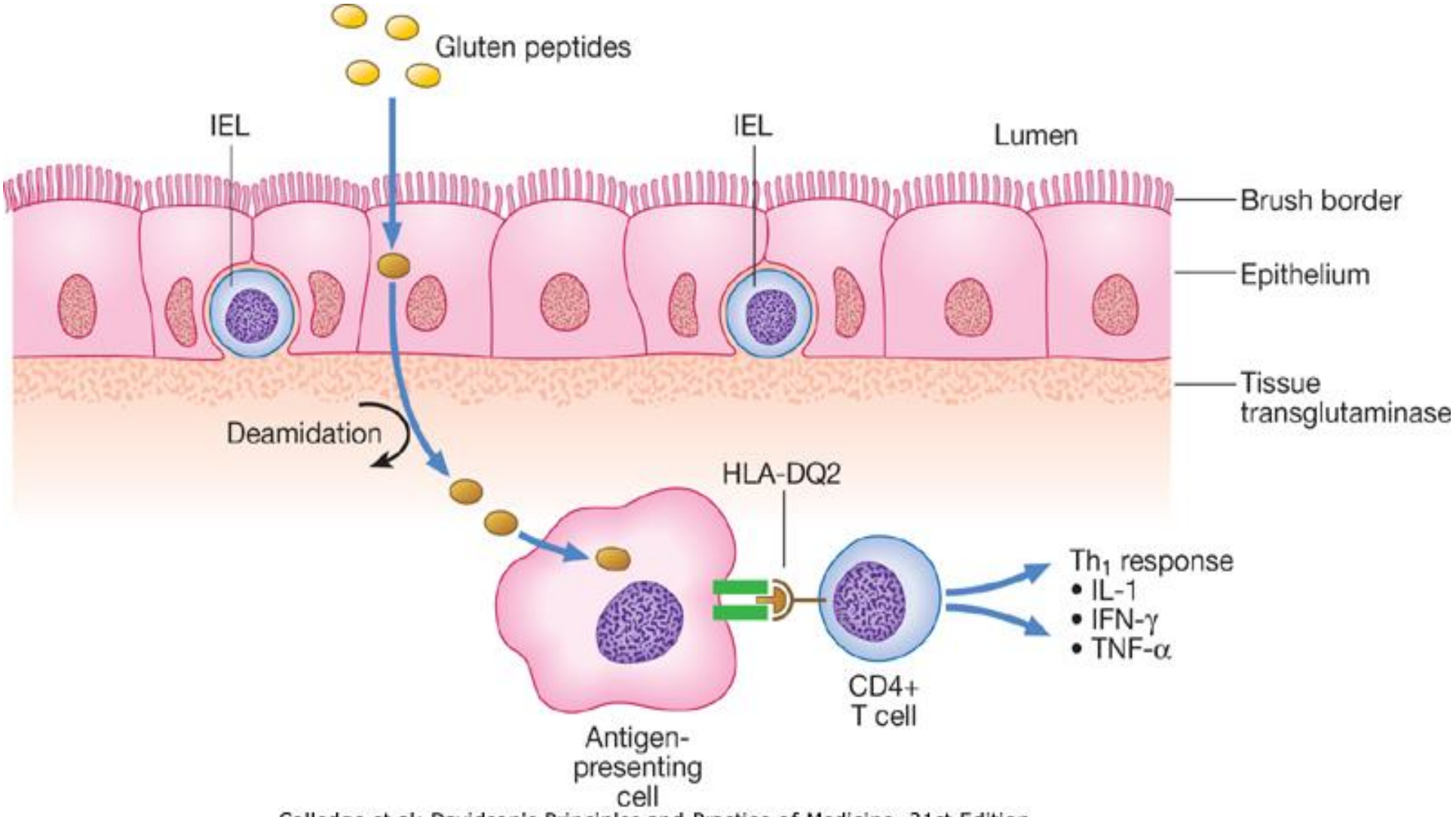
introduction

* is an immunologically mediated inflammatory disorder of the small bowel occuring in genetically susceptible individuals & lead to intolerance to wheat gluten , rye, barley & oats.

*its common worldwide but is more common in northern europe.

*50% of cases are asymptomatic

Pathophysiology



Colledge et al: Davidson's Principles and Practice of Medicine, 21st Edition

- gluten peptides are deamidated by the enzyme tissue transglutaminase in the subepithelial layer.
- They are then able to fit the antigen-binding on HLA-DQ2-positive antigen-presenting cells. Recognition by CD4+ T cells triggers a Th_1 immune response with generation of pro-inflammatory cytokines (IL-1, IFN-**γ** and TNF-**α**). Lymphocytes infiltrate the lamina propria, and increased intraepithelial lymphocytes (IEL), crypt hyperplasia and villous atrophy .

Clinical features

*Coeliac disease can present at any age.

* In infancy it occurs after weaning on to cereals and typically presents with diarrhoea, malabsorption and failure to thrive.

*In older children it may present with non-specific features such as delayed growth. Features of malnutrition are often found on examination and mild abdominal distension may be present. & short stature

* In adults peak onset is in the third or fourth decade and females are affected twice as often as males.

- Some patients have florid malabsorption while others develop non-specific symptoms such as tiredness, weight loss, folate deficiency or iron deficiency anaemia.

*Other recognized presentations include :

- ()oral ulceration, dyspepsia and bloating.
- ()under nutrition and increased risk of osteoporosis.
- ()abnormal coagulation due to vitamin K deficiency and are slightly at risk for abnormal bleeding

Extra-Intestinal manifestations of celiac disease

- Dermatitis Herpetiformis and other skin disorders
- Dental enamel hypoplasia
- Osteopenia/Osteoporosis
- Short Stature
- Delayed Puberty
- Iron-deficient anemia resistant to oral Fe
- Liver and biliary tract disease
- Arthritis
- Neurological problems
  - Ataxia
  - Peripheral neuropathy
  - Epilepsy
- Psychiatric Disorders
- Women Sub-In-fertility
  - Miscarriages
  - Low birth weight babies

Disease associations of coeliac disease

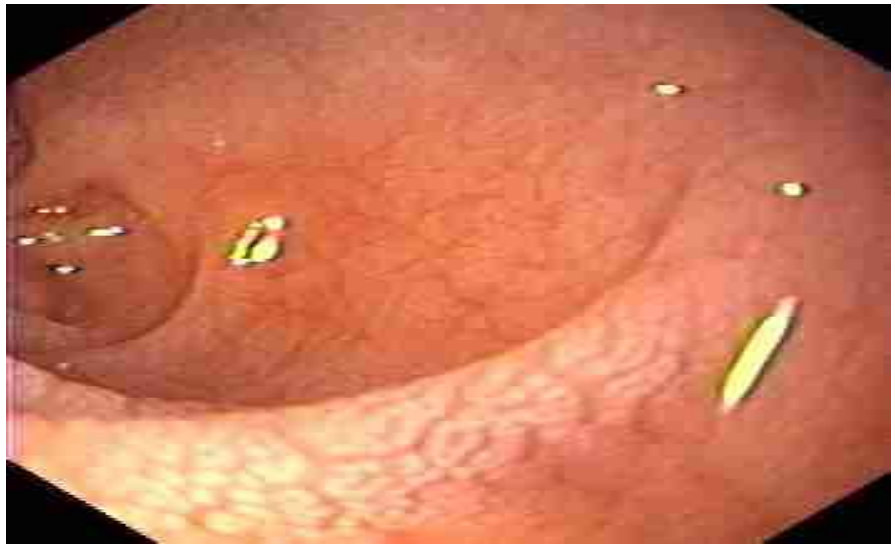
- Insulin-dependent diabetes mellitus (2-8%)
- Thyroid disease (5%)
- Primary biliary cirrhosis (3%)
- Sjögren's syndrome (3%)
- IgA deficiency (2%)
- Pernicious anaemia
- Inflammatory bowel disease
- Sarcoidosis
- Myasthenia gravis
- Neurological complications: encephalopathy, cerebellar atrophy, peripheral neuropathy, epilepsy
- Dermatitis herpetiformis

- ()Down's syndrome
- ()Enteropathy-associated T-cell lymphoma
- ()Small bowel carcinoma
- ()Squamous carcinoma of oesophagus
- ()Ulcerative jejunitis
- ()Pancreatic insufficiency
- ()Microscopic colitis
- ()Splenic atrophy

investigations

<u>Duodenal biopsy :</u>

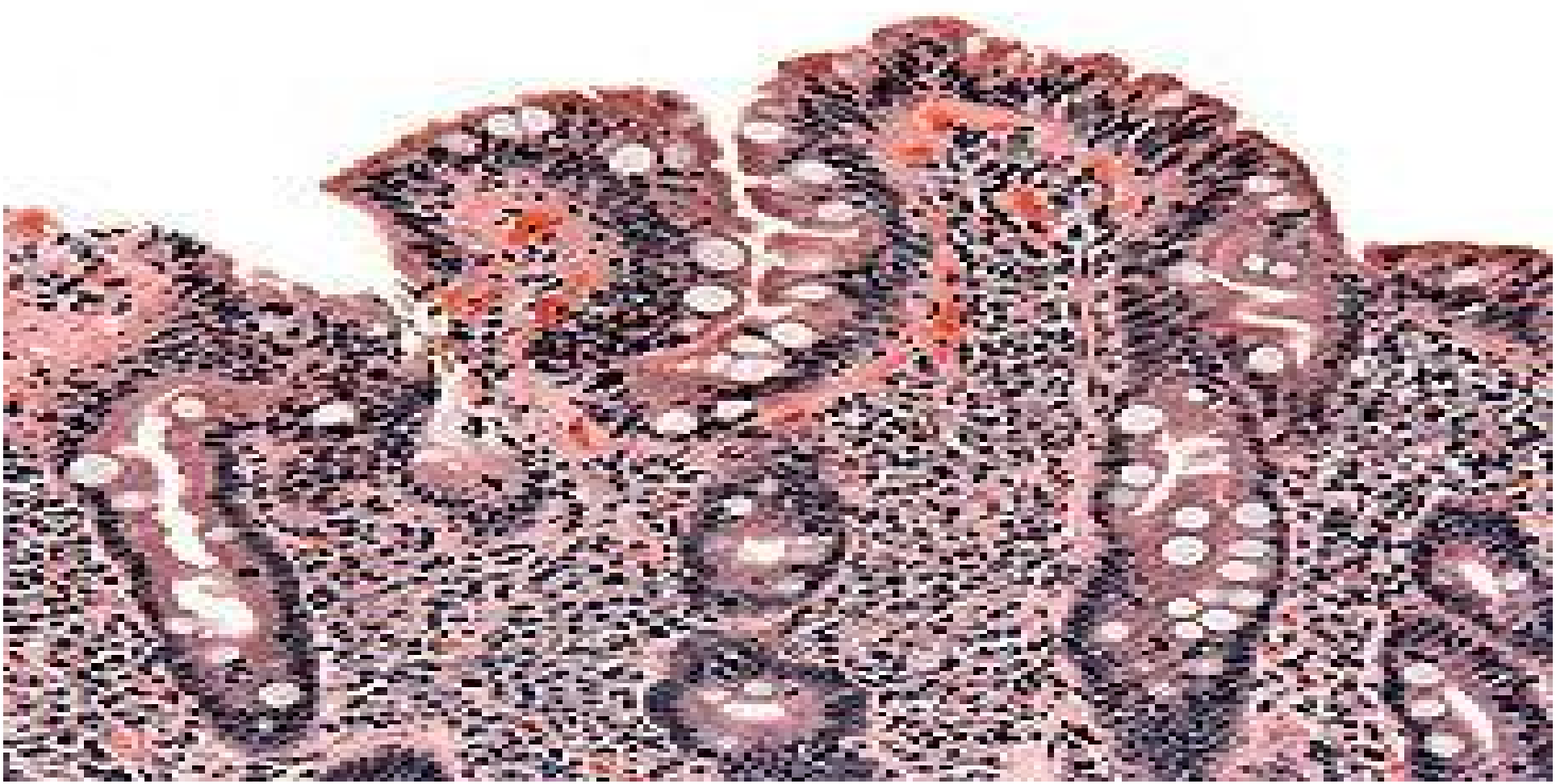
- Endoscopic small bowel biopsy is the gold standard.
- The histological features are usually characteristic but *other causes of villous atrophy should also be considered:*



Important causes of subtotal villous atrophy

- Coeliac disease
- Tropical sprue
- Dermatitis herpetiformis
- Lymphoma
- AIDS enteropathy
- Giardiasis
- Hypogammaglobulinaemia
- Radiation
- Whipple's disease
- Zollinger-Ellison syndrome

Villous atrophy, crypt hyperplasia, lymphocyte infiltiration of lamina propria



Antibodies : •

- ()IgA anti-endomysial antibodies are detectable by immunofluorescence in most untreated cases.
- ()IgG antibodies, however, must be analysed in patients with coexisting IgA deficiency.
- ()The tTG AB assay has replaced other blood tests in many countries as it is easier to perform,
- *but are not a substitute for small bowel biopsy; they usually become negative with successful treatment*.

Others

- () microcytic or macrocytic anaemia from iron or folate deficiency .
- () hyposplenism (target cells, spherocytes and Howell-Jolly bodies).
- ()Biochemical tests may reveal reduced concentrations of calcium, magnesium, total protein, albumin or vitamin D.
- ()Measurement of bone density should be considered to look for evidence of osteoporosis,

Management

- ()The aims are to correct existing deficiencies of iron, folate, calcium and/or vitamin D,
- () a life-long gluten-free diet. This requires the exclusion of wheat, rye, barley and initially oats,
- ()Regular monitoring of symptoms, weight and nutrition is essential.
- () an excellent clinical response, with disappearance of circulating anti-endomysial antibodies, probably do not need to undergo repeat jejunal biopsies.
- These should be reserved for patients who do not symptomatically improve or whose antibodies remain persistently positive.

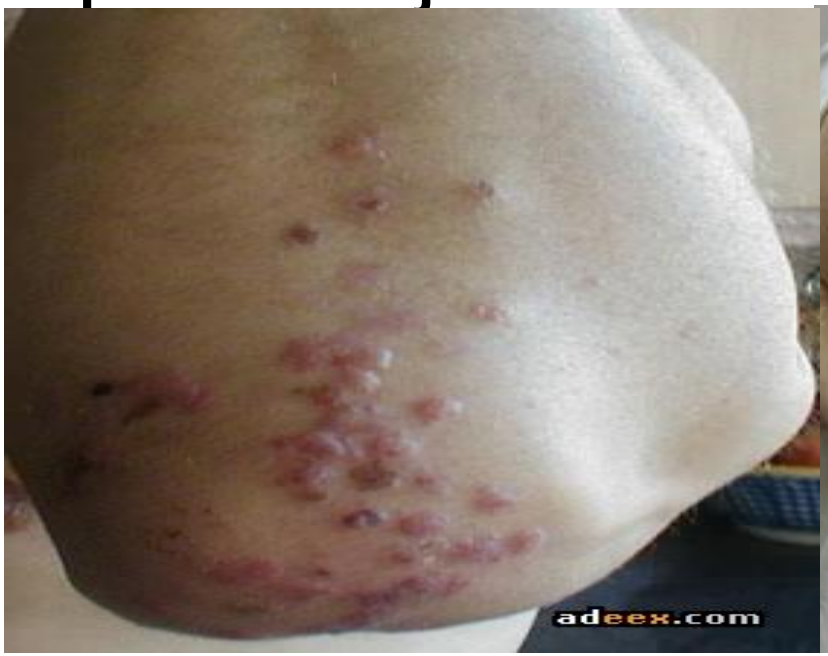
- ()Rarely, patients are 'refractory' and require treatment with corticosteroids or immunosuppressive drugs to induce remission.
- ()if their diet is satisfactory, other conditions such as pancreatic insufficiency or microscopic colitis should be sought, as should complications of coeliac disease such as ulcerative jejunitis or enteropathy-associated T-cell lymphoma

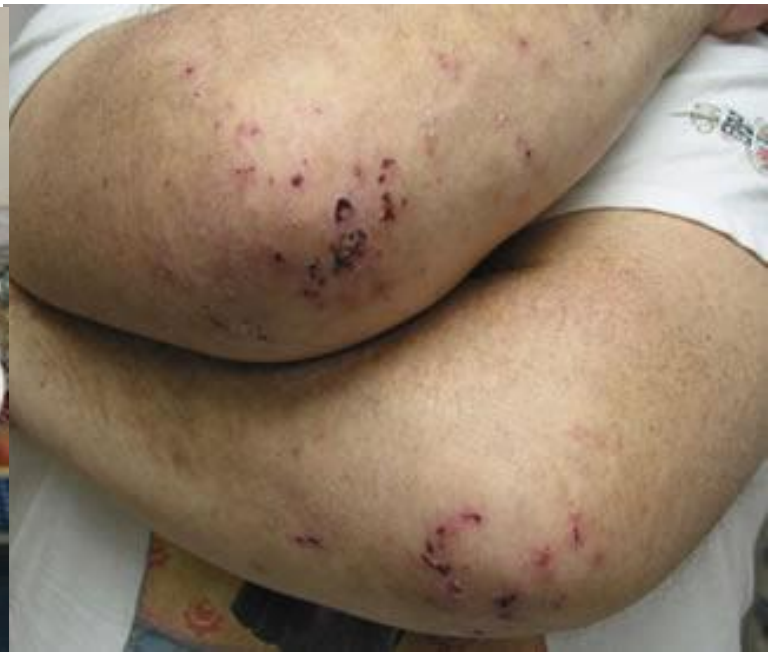
Complications

- 1- A twofold increased risk of malignancy, particularly of enteropathy-associated T-cell lymphoma, small bowel carcinoma and squamous carcinoma of the oesophagus,
- 2- A few patients develop ulcerative jejuno-ileitis;
- 3- Osteoporosis and osteomalacia may occur in patients with long-standing, poorly controlled coeliac disease.

Dermatitis herpetiformis

- ()This is characterised by crops of intensely itchy blisters over the elbows, knees, back and buttocks. .()Immunofluorescence shows granular or linear IgA deposition at the dermo-epidermal junction.

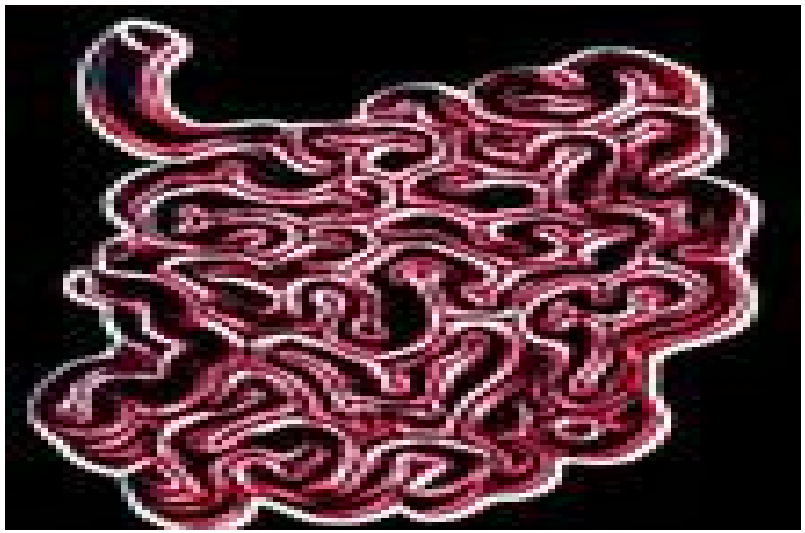




- () Almost all patients have partial villous atrophy on jejunal biopsy, even though they usually have no gastrointestinal symptoms.
- ()In contrast, fewer than 10% of coeliac patients have evidence of dermatitis herpetiformis,
- ()The rash usually responds to a gluten-free diet but some patients require additional treatment with dapsone (100-150 mg daily).

Tropical sprue

- () is defined as chronic, progressive malabsorption in a patient from the tropics, associated with abnormalities of small intestinal structure and function.
- () The disease occurs mainly in the West Indies and in Asia, including southern India, Malaysia and Indonesia.



Clinical features

() There is diarrhoea, abdominal distension, • fever, anorexia, fatigue and weight loss.

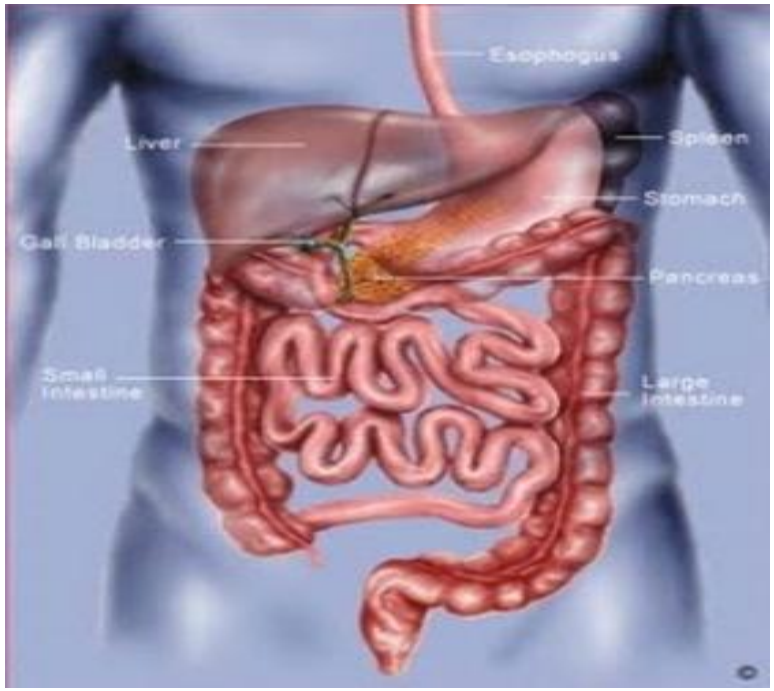
() the features of megaloblastic anaemia • (folic acid malabsorption)

and ankle oedema, glossitis

and stomatitis, are common.

() Remissions and relapses •

may occur. •



Management :

- () Tetracycline 250 mg 6-hourly for 28 days is the treatment of choice.
- () In most patients pharmacological doses of folic acid (5 mg daily) improve symptoms and jejunal morphology.