

# Malabsorption Syndromes

**Dr. Omar Saadah, MBBS, MRCP, CABP, DCH**

**A. Professor & Consultant of Pediatric Gastroenterology,**

**Hepatology & Nutrition**

Pediatric Department

King Abdul Aziz university Hospital

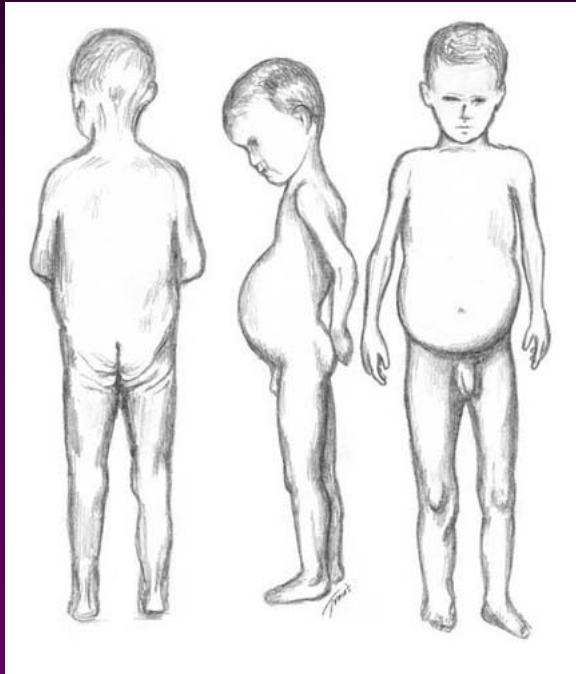
# CELIAC DISEASE

- Immune Mediated Gluten sensitive enteropathy

# Clinical manifestations

- Chronic diarrhea
- Steatorrhea
- Edema
- Abdominal distension
- Recurrent mouth ulcers
- Growth failure

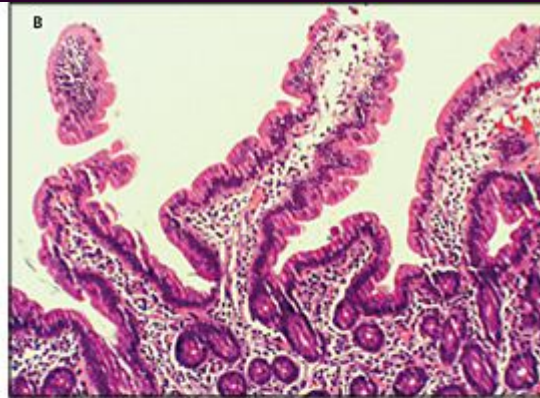
# Clinical manifestation



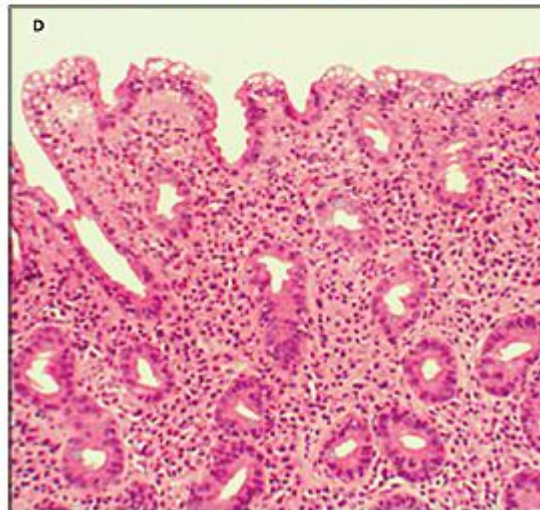
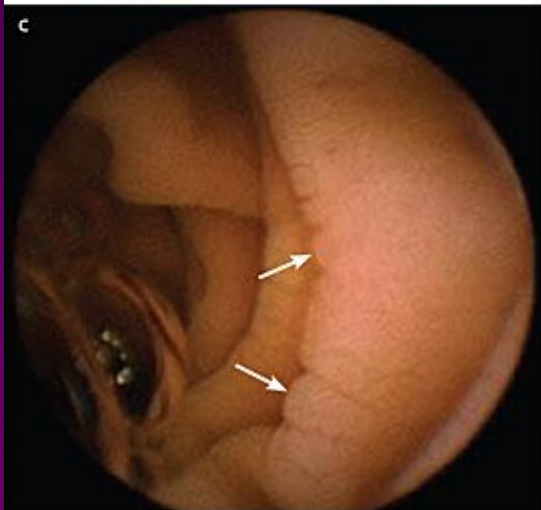
# Laboratory abnormalities

- IDA (Hemoglobin, MCV, MCH)
- Hypoalbumenia
- Rickets ( $\text{Ca}^{+2}$ ,  $\text{Ph}^{+2}$ , ALP)
- Serology:
  - Tissue transglutaminase antibody
  - Endomysial antibody
  - Antigliadin antibody

# Diagnosis



Normal mucosa



Abnormal mucosa

# Complications

Rickets / Osteomalacia

Osteoporosis

Growth failure

Refractory anemia

Autoimmune disorders

Small bowel malignancy

# Treatment

- Gluten free diet
- Life long

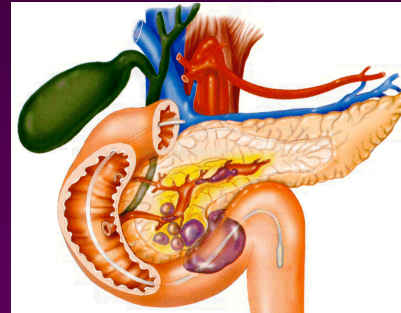
# Cystic fibrosis

- AR
- Cystic fibrosis transmembrane conductance regulator (CFTR) gene mutation
- The product of this gene is a chloride ion channel important in creating sweat, digestive juices, and mucus
- Dehydration of body secretion

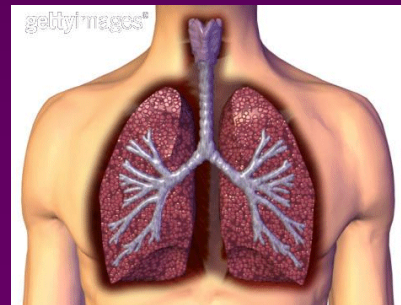
# Cystic fibrosis

- Two main organs affected:

Pancreas



Lungs



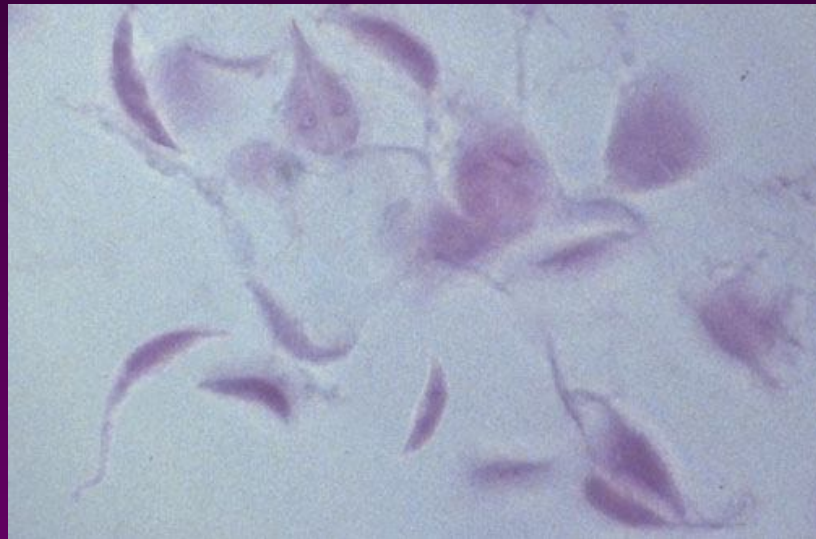
# Diagnosis

- Sweat chloride test (chloride more than 80)
- Genetic testing for mutation

# Treatment

- Pancreatic enzyme supplement
- Fat soluble vitamin supplement
- Chest physiotherapy
- Treating chest infections
- Nutritional support

# Giardiasis



# Clinical manifestation

- Chronic diarrhea
- Growth failure
- Abdominal distension

# Diagnosis

- Stool microscopy
- Duodenal aspirate
- Histopathology

# Treatment

- Metronidazole
- Tinidazole

# Lymphangiectasia

# Clinical pictures

- Edema (Unilateral or bilateral)
- Chronic diarrhea
- Steatorrhea

# Laboratory

- Lymphopenia
- Hypogammaglobulinemia
- hypoalbuminemia

# Lymphangiectasia

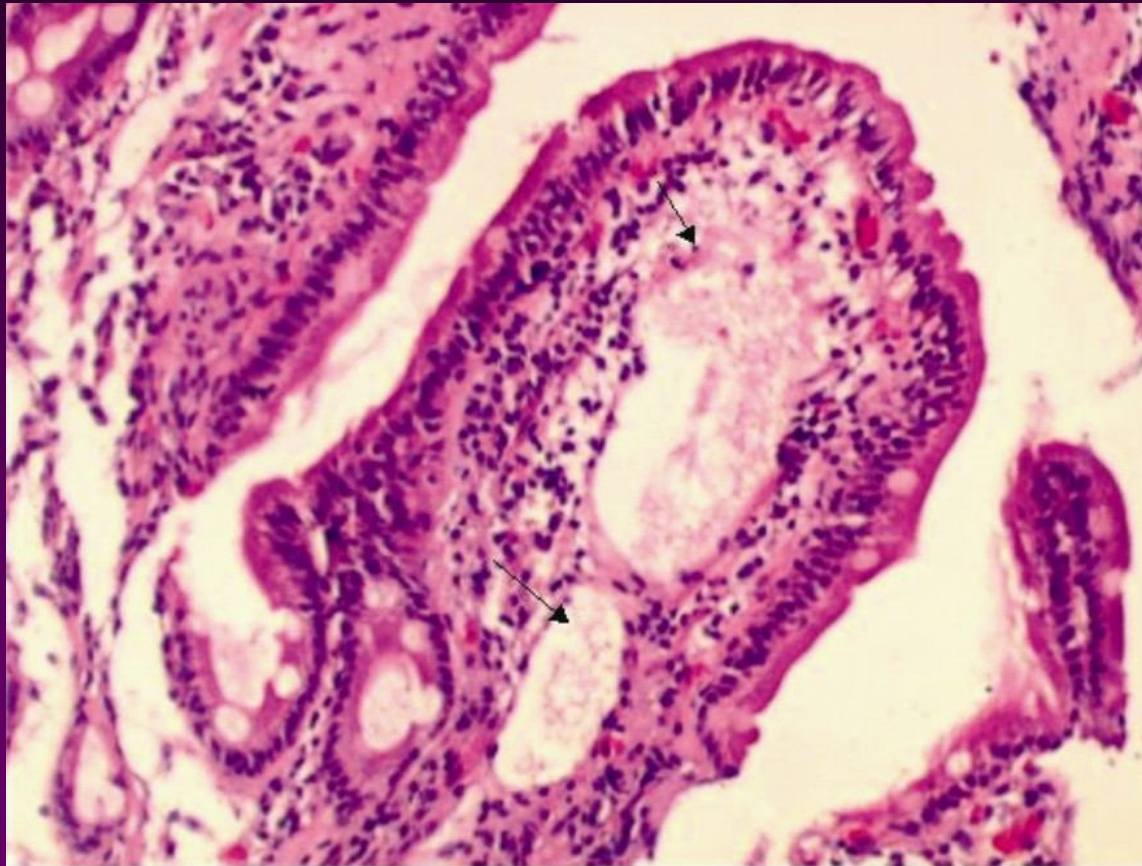
- ◆ Congenital or acquired
- ◆ Protein-losing enteropathy
- ◆ Steatorrhoea

# Endoscopy

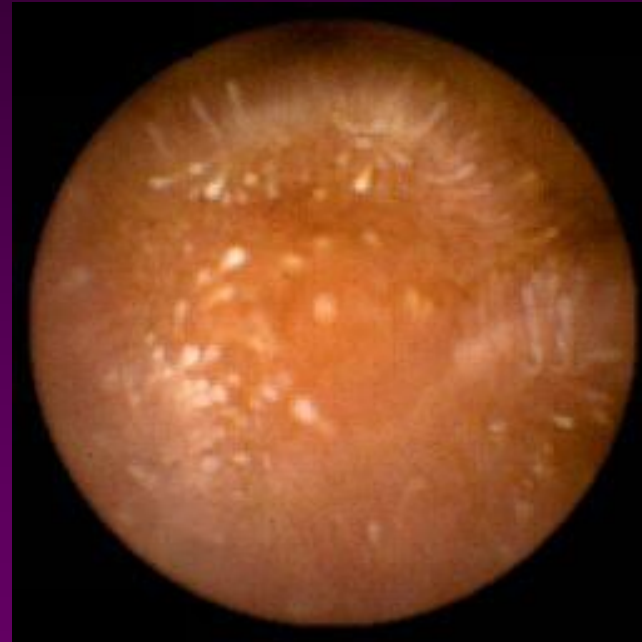
White opaque spots on the  
Small intestinal mucosa



# Histopathology



# Capsule endoscopy



# Treatment

- Low fat diet
- High protein diet
- MCT
- Surgery for localized disease

# Abetalipoproteinemia

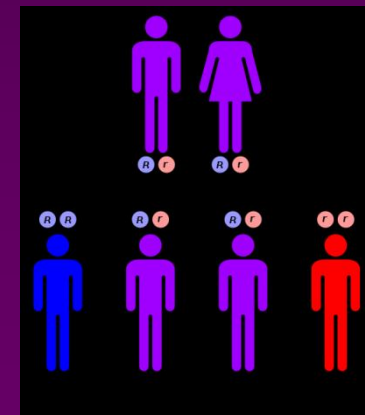
# Genetics

AR condition

Microsomal Triglyceride Transfer Protein Gene Mutation

Microsomal Triglyceride Transfer Protein (MTTP)

Essential for Synthesis of Apolipoprotein B



# Symptoms

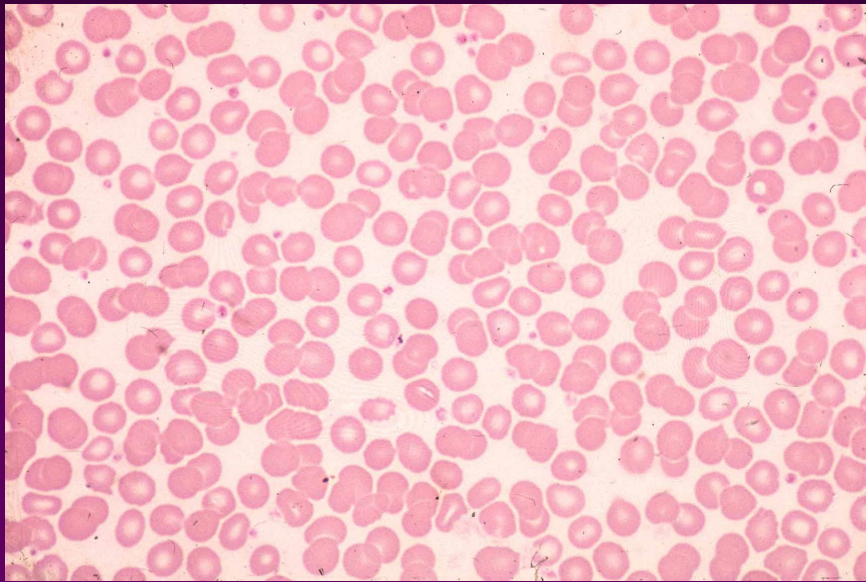
## Infancy:

- Diarrhea
- Steatorrhea
- Abdominal distention

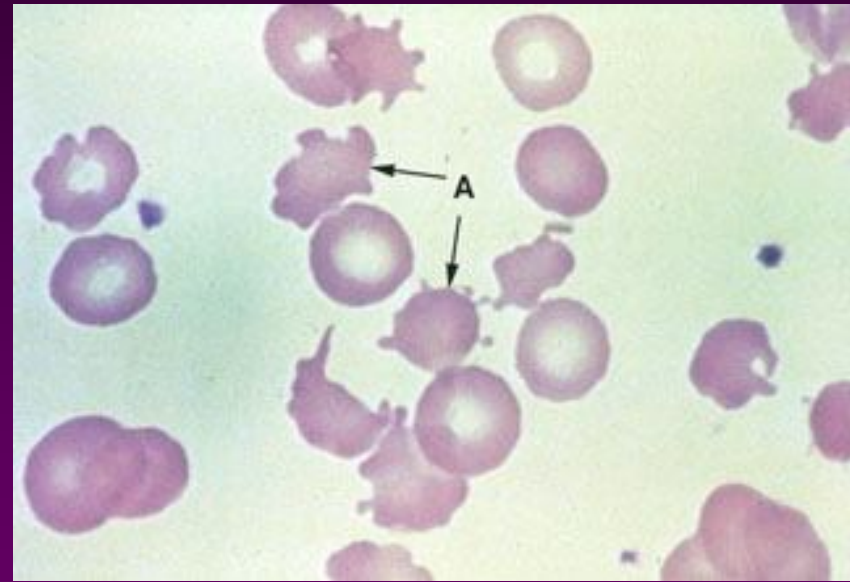
## Later:

- Spinocerebellar disorder
- Retinitis Pigmentosa

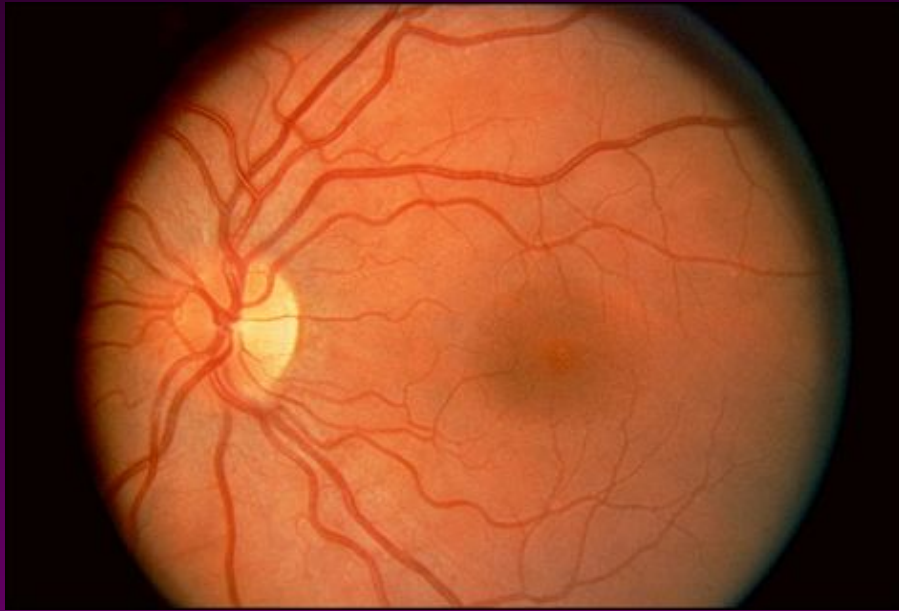
- Blood film



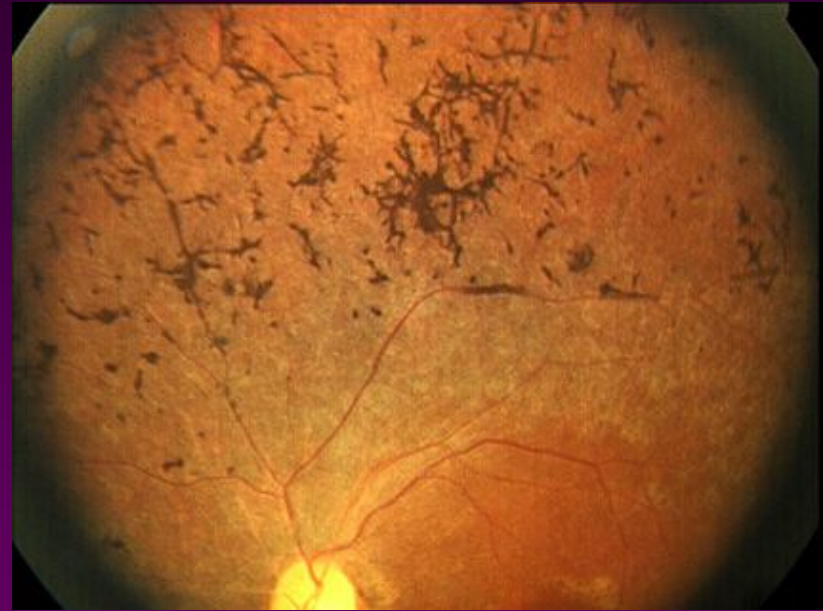
Normal



Acanthocytes



Normal Fundus



Retinitis Pigmentosa

# Treatment

- Low fat diet
- Supplement with MCT
- High protein and calories
- Vitamin E supplement