**4th class/ pathology ------- lecture 10**

**DISORDERS OF THE INTESTINE**

**HAEMORRHOIDS (PILES)**

Haemorrhoids or piles are varicosities of the haemorrhoidal veins. They are called **internal piles**if dilatation is of superior haemorrhoidal plexus covered over by mucous membrane, and **external piles**if they involve inferior haemorrhoidal plexus covered over by the skin. **Their possible causes include the following:**

1. Portal hypertension

2. Chronic constipation and straining at stool

3. Cardiac failure

4. Venous stasis of pregnancy

5. Hereditary predisposition

6. Tumours of the rectum.

**Malabsorption syndromes**

Malabsorption may be caused by disorders of:

• intraluminal digestion—assisted by, for example, gastric juices and pancreatic digestive enzymes (these are necessary for breakdown of macromolecules)

• intraluminal solubilization—liver secretes bile acids required for solubilization and absorption of fats

• terminal digestion—enzymes located on the brush border of the small intestinal mucosa hydrolyse large molecules for absorption, especially complex sugars (e.g. sucrase for sucrose and lactase for lactose)

• transepithelial transport—mucosa is specialized for absorption.

**Systemic effects of the malabsorption syndromes:**

• Weight loss and anorexia

• Abdominal distension .

• Diarrhoea .

• Steatorrhoea—malabsorption of fat, producing pale, foul-smelling stools that characteristically float in water

• Muscle wasting.

**Classification of malabsorption syndromes**

**Coeliac disease**

This is caused by a chronic inflammatory response to the protein gliadin, a component of gluten (found in wheat, oats, barley and rye). Atrophy of small intestinal villi and crypt hyperplasia are the result. It affects about1 per 1000 in most Caucasian populations of Western Europe; it israre in other ethnic origins.

It can present at any age but it is an important cause of failure to thrive in infants and children.

Antigliadin antibodies are present in the majority of cases, although anti-endomyseal antibodies have a greater sensitivity and specificity as a diagnostic aid.

Other tests that may be used are small-bowel biopsy and a gluten challenge, in which symptoms improve on a gluten-free diet, but relapse once this is stopped.

**Tropical sprue**

This chronic and progressive malabsorption syndrome without a definable cause is seen in patients who live or have lived in the tropics, and in the absence of other intestinal disease or parasites. The disease occurs mainly in the West Indies and Asia.

**Aetiology is unclear**; however, the condition is thought to be infective, probably toxigenic **Escherichia coli.**

Clinical features and histological appearances resemble those of coeliac disease. However, a gluten-free diet has little beneficial effect**.**

**Whipple disease**

Whipple disease is a multisystem disorder involving malabsorption,weight loss, lymphadenopathy and joint pain. The causative agent is the **Gram-positive bacillus Tropheryma whippelii**. This rare condition is characterized by tissue infiltration with foamy macrophages that are periodic acid-Schiff (PAS) reagent positive.

**Bacterial overgrowth syndrome**

In this syndrome, there is malabsorption secondary to excessive bacteria in the small intestine, usually the jejunum.

**B12 deficiency.**

Diarrhoea is both secretory (due to bacterial products affecting mucosa) and osmotic (due to unabsorbed products and deficiency of disaccharidases because of mucosal damage). Clinical features are weight loss, diarrhoea and anaemia (due to vitamin B12 deficiency).

**Disaccharidase deficiency**

The most important disaccharidase is lactase, which is essential for the digestion of milk sugar (lactose). All babies have lactase in their intestines but the enzyme disappears later in life in about 80% of Africans and Asians. The presence of undigested lactose in the small intestine (followingconsumption of raw milk) causes diarrhoea and abdominal pain.