THE ROLE OF DIFFERENT IMAGING MODALITIES IN DIAGNOSIS OF IDIOPATHIC INFLAMMATORY BOWEL DISEASE

INTRODUCTION AND AIM OF WORK.

INTRODUCTION:

The diagnosis of inflammatory bowel disease is based on digital rectal examination, the contrast enema, and / or endoscopy and supported by the patient's history . Ulcerative colitis and Crohn's colitis (Crohn's disease) comprise 90% of all cases of chronic inflammatory bowel disease and are the first to take into consideration in differential diagnosis. Both diseases are idiopathic since neither aetiology nor pathogenesis is completely understood (1).

The first description of ulcerative colitis has been attributed to Wilks and Moxon in 1889. In contrast, Crohn's disease was not generally appreciated until its description in 1932 by Crohn et al (2).

Ulcerative colitis is a non-specific, chronic, diffuse, essentially mucosal inflammation of the colon, only occasionally associated with backwash ileitis. Ulcerative colitis is more common than Crohn's disease with an annual incidence of 2 to 10 cases per 100,000 population. The worldwide prevalence ranges from 35 to 100 cases per 100,000 population (3).

Crohn's disease is a non-specific, chronic, segmental, transmural inflammation of the bowel. It has a worldwide distribution but is most common in Northern Europe, North America, and Japan. Prevalence has increased, mostly in younger age gruops, with a peak between 15-22 years. Both sexes are equally affected. A familial tendency has frequently been described. Crohn's disease can affect any part of the gastrointestinal tract from the mouth to the anus. The small bowel is involved by Crohn's disease in 80% of patients with the terminal ileum by far the most common location. Colonic involvement is seen in approximately 60% of all patients with Crohn's disease (4, 5).

Both ulcerative colitis and Crohn's colitis reveal many similarities with respect to:

- Etiology and pathogenesis,
- Epidemiology,
- Lack of pathognomonic criteria,
- Clinical manifestation including local and extra-intestinal complications,
- Biochemical and immunological properties,
- Radiological and endoscopic findings (6, 7)

Socio-economic factors do not appear to contribute to the epidemiology or etiology of either condition. Increased familial occurrence is found in both conditions with a range from 0.6% to 16% for ulcerative colitis and approximately 9% for Crohn's colitis (1).

There is no single clinical, biochemical, radiological, endoscopic or pathological feature that is pathognomonic for one or the other type of idiopathic inflammatory bowel disease (IIBD), which means that neither disease has specific findings present in one disease and absent in the other disease (8).

IIBD can be diagnosed with confidence after the exclusion of bacterial, viral or parasitic colonic infections and of other inflammatory bowel disorders due to antibiotics, irradiation, ischaemia, or any systemic disease which may affect the colon (9).

Double contrast barium enema and endoscopy plays an established role in the evaluation of patients with inflammatory disorders of the small and large bowel. They are usually performed to determine the nature, the extent and the severity of the inflammatory process. Although, barium studies and endoscopy provide a wealth of information regarding the mucosa and structural abnormalities (6), Cross-sectional imaging techniques (US, ES, CT, MRI) have rapidly been adapted to the alimentary tract and have greatly contributed to the "gastro-intestinal imaging". In IIBD, they can provide an important additional diagnostic prospective. These modalities are reserved for cases where displacement of bowel loops seen on barium studies must be elucidated or where complications such as extent of fistulae or abscesses need to be assessed and also to determine the extent of the neoplasm associated with idiopathic inflammatory bowel disease (10).