Summary and Conclusion

Tuberculosis remains one of the major health problems in the world. WHO estimates that each year 8 million new cases of tuberculosis occur and approximately 2-3 million people die from the disease. Tuberculosis is a disease of developing countries; however, its incidence is increasing in developed countries as well, mainly in the immigrant population.

Tuberculosis can involve any part of the gastrointestinal tract and is the sixth most frequent site of extrapulmonary involvement. Its causative pathogen is *Mycobacterium tuberculosis*. Tuberculosis bacteria reach the gastrointestinal tract via haematogenous spread, ingestion of infected sputum, or direct spread from infected contiguous lymph nodes and fallopian tubes. The gross pathology is characterized by transverse ulcers, fibrosis, thickening and stricturing of the bowel wall, enlarged and matted mesenteric lymph nodes, omental thickening, and peritoneal tubercles.

Intestinal tuberculosis is one of the earliest known diseases of mankind. *Hippocrates*, as early as 460 B.C., remarked about abdominal tuberculosis, ‘that the diarrhea attacking a person with chronic cough is a mortal symptom’. The association of pulmonary tuberculosis with inflammatory intestinal lesions was, however, recognized only as late as 1643 by *"Virordt"*.

Conventionally, intestinal tuberculosis has been categorized into primary and secondary. When intestinal tuberculosis is associated with pulmonary tuberculosis it is called ‘secondary’ and when the disease remains confined to the gastro-intestinal tract, it is termed as ‘primary’ suggesting an initial infection. A better term for this condition would be ‘isolated intestinal tuberculosis’. Even this term may be misleading as the

disease may be only apparently confined to the intestines on clinical and radiological observations and dormant tubercular foci may be simmering in other parts of the body, only to be discovered at autopsy.

Hoon et al, originally classified the gross morphological appearance of the involved bowel into ulcerative, ulcerohyperplastic and hyperplastic varieties.

Intestinal tuberculosis can be difficult to diagnose. The reasons for this include absence of a particular pattern of symptoms and signs. In fact, symptoms of the disease may be vague and signs nonspecific. Thus, a high degree of suspicion is needed. Even with adequate imaging, endoscopic examination and bacteriologic tools, diagnosis can correctly be made in only around 50% of patients with intestinal tuberculosis.

Symptoms and signs are very variable and clinical diagnosis almost impossible. The only convincing way to prove the diagnosis is to do bacteriological and histopathological examination of the biopsy specimens obtained by Peritonoscopy or laparotomy.

Because of a wide spectrum of clinical presentation, Intestinal tuberculosis can mimic a large number of medical and surgical conditions, The differential diagnosis includes *inflammatory diseases* such as Crohn's disease, and appendicular abscess and mass, *infections* including Yersinia enterocolitis, herpes, cytomegalovirus, amoebiasis, actinomycosis, and histoplasmosis, and *neoplasms* such as adenocarcinoma, carcinoid, and lymphoma "non-Hodgkin lymphoma".

Most patients with abdominal TB can be treated with anti TB therapy alone but some may require surgery to relieve the obstruction either by strictureplasty or resection and anastomosis. Operative findings of clear straw colored ascites, peritoneal tubercles, adhesions, enlarged mesenteric lymph nodes, hypertrophic ileocecal, colonic lesions and

short fibrotic intestinal strictures, suggest the diagnosis of abdominal TB. Multiple strictures in small intestine may be present.

During operation, conservative surgical procedures are recommended e.g. limited segmental ileocaecal resection is performed in patients with ileocecal lesion. Strictureplasty is performed for small intestinal strictures. Resection and anastomosis is performed in patients with tight strictures that almost totally obliterate the lumen, Patients with acute abdomen require emergency laparotomy.

So we can obtain a conclusion from this assay that the diagnosis of intestinal TB is very difficult specially if it is of primary type (not proceeded by pulmonary TB) and most of the cases discovered accidentally during operations, so the surgeon must be consider intestinal TB in mind as a cause of intestinal obstruction and acute abdomen.

Recommendations:

At the end of this study we can recommend by the following:

❖Be careful that the signs and symptoms of ITB similar to that of many abdominal diseases.

❖Diagnosis of intestinal TB is very difficult specially if not proceeded by pulmonary TB.

❖The most promising new approach to this problem is the PCR assay.

❖Other tests can help in diagnosis as ELISA, Rapid tests and the tuberculin skin test

❖Endoscopic mucosal biopsies from the colon and terminal ileum may show the picture of pathologic changes.

❖Don't forget ITB as a cause of intestinal obstruction or acute abdomen.

❖Treatment of ITB is mainly medical.

❖Standard TB treatment occurs in two phases:

• **Initial phase:** The initial phase consists of 8 weeks of isoniazid, rifampin, pyrazinamide, and ethambutol and is administered *daily for 2 weeks*; then, therapy is switched to *twice weekly for an additional 6 weeks*.

• **Continuation phase:** The continuation phase consists of 18 weeks of isoniazid and rifampin administered twice weekly.

❖Surgical interference is obtained if there is a complication.

❖In recent years, local ileocaecal resection has been introduced as it was felt that right hemicolectomy was too severe operation and, with modern chemotherapy, unnecessarily extensive.

❖Preventive procedures can solve this problem early.