Introduction

Gastrointestinal stromal tumors (GISTs) are rare tumors of the gastrointestinal tract, mesentery, and omentum. However GIST is the most common sarcoma of the gastrointestinal tract and ; accounts for 5% of all sarcomas. The estimated annual incidence is 10-20 cases per million, of which 20-30% are malignant ***(Emory et al., 2003)***.

GISTs are most commonly found in the stomach (60-70%), but they can occur in all other parts of the gastrointestinal tract. About 20-30% of GISTs arise from the small intestine, and 5-15% from the colon and rectum. GISTs can also be found in the oesophagus (<5%), omentum (<5%), mesentry or retoperitoneum. ***(Beghini A et al., 2001)***

The median age at diagnosis is about 60. GISTs are occasionally found in young adults, but they are very rare in children. Nearly all GISTs arise as a result of a somatic mutation, but rare familial cases associated with mutated KIT have been identified. The hereditary forms are characterised by me presence of multiple tumors and in some cases hyperpigmentation of the skin and the mucous membranes, systemic mast-cell disease, multiple naevi, urticaria pigmentosa, diffuse spindle-cell hyperplasia in the myenteric plexus layer of the gastrointestinal tract. Over 95% of patients present with a solitary tumor; in 0-40% of cases these tumors directly invade the surrounding organs ***(Edmonson et al, 2002)***.

The most common symptoms of GISTs are vague abdominal discomfort or pain, presence of a palpable abdominal mass, feeling of abdominal fullness, and secondary symptoms resulting from tumor bleeding. GISTs can also cause altered bowel habits, bowel obstruction or perforation, dysphagia, and fever ***(Catena et al., 2003)***.

Duodenal GISTs occasionally cause obstructive jaundice. GISTs are commonly discovered during emergency surgery for unexpected perforation ,of the; gastrointestinal tract and consequent intra-abdominal blood loss. About 15-50% of GISTs present with overtly metastatic disease ***(Nishida and Hirota ., 2004)***.

A pathogenetic relation has also been suggested between neurofibromatosis type I (von Recklinhausen's disease) and GISTs because of the high frequency of nonrandom association of these diseases ***(Maeyama et al, 2005)***.

GISTs originate from stem cells that differentiate towards the interstitial cells of Cajal (ICCs), and that GISTs should be called gastrointestinal pacemaker-cell tumors. ICCs arise from precursor mesenchymal cells and are the pacemaker cells that bring about autonomous movement of the gastrointestinal tract. ***(kindblom et al., 2005).***

GISTs characteristically express the KIT protein, a transmembrane tyrosine kinase receptor for stem-cell factor. Most GISTs, have a mutation in the KIT proto-oncogene that translates into a gain-of-function constitutive activation of the KIT kinase. KIT activation Seems to be an early tumor- promoting event in pathogenesis ***(Nishida et al, 2003)***

The discovery of gain-of-function mutations in the KIT proto-oncogene in GISTs by Hirota and colleagues in 2005 ***(Hirota S et al, 2005)*** was of crucial importance in terms of the genesis and classification of these tumors This finding led to the development of rational, miolecularly targeted therapy of GIST with the KIT-receptor tyrosine-kinase inhibitor, imatinib mesylate (formerly known as STI5) ***(Strickland et al., 2006)).***

GISTs characteristically stain strongly for the GDI 17 antigen, an epitope of the KIT- receptor tyrosine kinase.60%-70% GISTs stain for CD34. Up to 40% of GISTs are also positive for smooth muscle actin (SMA) ***(Fletcher CDM et al., 2002)***

On histological analysis most GISTs look fairly benign, which is surprising in view of the malignant potential of the disease. However, the 'histological appearance of GISTs can vary greatly among patients, and their malignant potential ranges from clinically benign tumors to aggressive cancers. ***(Crosby JA et al., 2006)***.

The spindle-cell variant of malignant GIST (70%) corresponds to tumors previously classified as leiomyosarcoma, and many of the epithelioid or round-cell variants (30%) were previously thought to be leiomyoblastoma. Most tumors previously diagnosed as gastrointestinal autonomic nerve tumors (GANTs) are in fact GISTS.**(*DeMatteo PR et al., 2005)***