

## CASE REPORT

# STOMACH GASTROINTESTINAL STROMAL TUMOURS (GIST) INTUSSUSCEPTED INTO DUODENUM : A CASE REPORT

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**Gastrointestinal stromal tumours (GIST) are tumours of gastrointestinal tract and mesentery. The commonest site of its occurrence is the stomach. Patients with GIST are usually asymptomatic but they can present as abdominal pain, bleeding and rarely gastric outlet obstruction. In this particular case, the patient presents with symptoms of anaemia, partial gastric outlet obstruction and intermittent epigastric pain. Laparotomy was performed and a diagnosis of gastroduodenal intussusception secondary to gastrointestinal stromal tumour was made.**

*Key words : Gastrointestinal stromal tumours (GIST)*

Submitted: 20 February 2005, Accepted: 30 Jun 2008

### Introduction

Gastrointestinal stromal tumours (GIST) are distinct subgroup of tumours that are derived from the gastrointestinal mesenchyma which could neither be classified as neurogenic nor smooth muscle-derived tumours. These tumours include leiomyomas, leiomyoblastomas and leiomyosarcomas. GIST was first applied to this group of tumours in 1983 by Mazur and Clark (1). These tumours can occur at any sites along the gastrointestinal tract. Stomach is the commonest site followed by small bowel. The median age of its occurrence is 50-60 years old with a slight male predominance (2). The incidence rate of these tumours is around 16 per one million populations and in the UK the rate of new cases is about 900 cases per year (5).

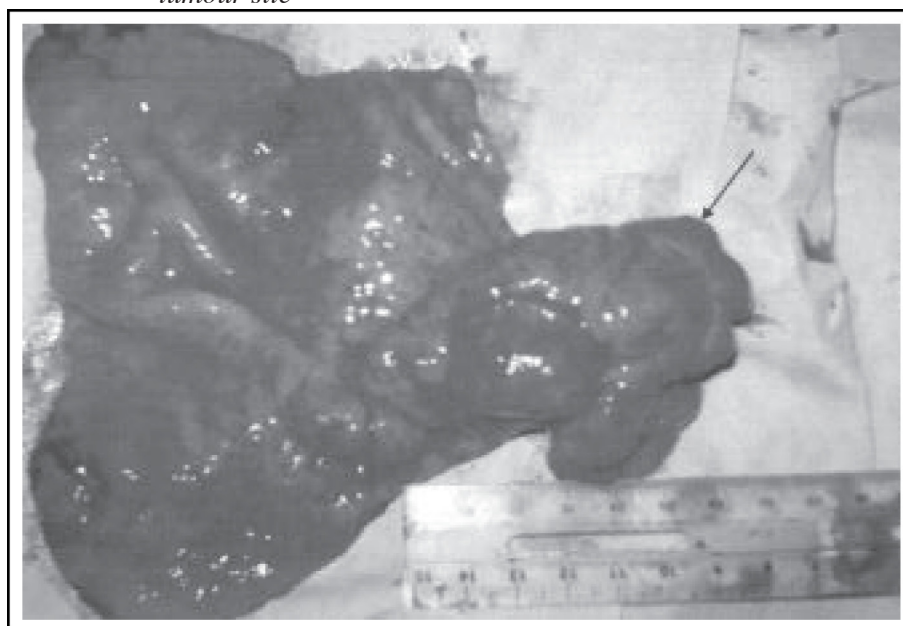
### Case Report

This patient is a 29-year-old Iban man who presented with intermittent upper abdominal pain associated with nausea and vomiting. He also claimed to have symptoms of anaemia such as lethargy, generalised body weakness, giddiness and exertional dyspnoea for 5 months. He had poor appetite where he is able to tolerate fluid and small amount of solid diet and he is losing weight. In the

past, he had history of passing malaenic stool without haematochezia. Multiple oesophagogastroduodenoscopy (OGDS) were done in the past and he was told to have stomach ulcer that is associated with *Helicobacter pylori* infection. He was admitted to the Male Surgical Ward for work-up of his illness.

On examination, he is a small built young man and is clinically pale. Abdominal examination did not reveal any mass or organomegaly. There was no lymphadenopathy. Digital rectal examination revealed malaenic stool. An urgent OGDS was performed and revealed a huge tumour in the stomach obstructing the pylorus and the duodenum was blocked. Biopsy was taken and reported as benign gastric ulcer. Laparotomy was performed and intra-operatively there was a huge polypoidal mass arising from the antrum measuring 6 x 6 cm. The mass had a wide pedicle and was bosselated with area of necrosis. The whole mass had intussuscepted into the duodenum down until D2/ D3 junction. There were few lymph nodes identified along the right gastro-epiploic vessel. The duodenum was stretched and dilated. Intra-operative diagnosis of GIST was made with Bilroth's I Partial Gastrectomy was performed. Histopathology report confirmed the diagnosis. Surgical margins were clear. Patient recovered well from the operation.

Figure 1 : Photograph of cut open specimen with arrow indicating the tumour site



## Discussion

The presentation for GIST is usually a non-specific symptom and it all depends on the size and location of the tumours. Small GISTs which is 2 cm or less is usually detected as an incidental finding during investigation for other unrelated disease because they are usually asymptomatic. The presentation of stomach GIST causing duodenal obstruction is not common. There were not many cases of GIST reported presenting with gastroduodenal intussusception. Crowler et al. had reported a case of gastroduodenal intussusception in 59-year-old lady who presented with a year history of indigestion and a 3-week history of intermittent severe epigastric pain, early satiety, bilious vomiting with undigested food. His patient had an OGDS done and noted gastric outlet obstruction. A Computerized Tomography Scan (CT Scan) was done with the diagnosis of intussusception which was confirmed later by laparotomy (3). In this patient we had a young man who presented with symptoms of anaemia and intermittent epigastric pain. The chronic anaemia is likely due to an ongoing chronic blood loss from the non healing gastric ulcer. He also had history of intermittent abdominal pain as a result of intussusception. In view of the longstanding disease process which was not treated, there was significant duodenal dilatation as a result of chronic intussusception. It was not a complete obstruction as he was still able to tolerate fluid pre-operatively.

There was no single investigation diagnostic

of GIST diagnosis. CT scan is not sensitive in diagnosing GIST but reliable in determining the size and presence of any secondaries. Barium contrast studies and OGDS help localise the tumour but OGDS is more superior because it offered therapeutic therapy as well as detecting smaller GIST (5). Commonly the diagnosis of GIST was made based on the findings of a well-defined extraluminal mass, frequently polylobulated with a pseudocapsule as seen in this patient. The confirmatory diagnosis of GIST can only be achieved via histological and immunohistochemical methods.

Histologically, GIST is composed of either spindle-shape cell (70%) or epitheloid cell (20%) or mixed sphindle and epitheloid (10%). In contrast to smooth muscle myoma or sarcoma, GISTs are typically immunoreactive for KIT (CD117). This is very important as 95% of GISTs are positive for KIT. The positivity for CD 34, the haemotopoietic progenitor cell antigen is reported in 70-80% of GIST (2).

Surgical therapy remains the mainstay of treatment for GIST. Complete *en bloc* resection (R0 resection) is the intention during the surgical procedure. Five years survival rate after a complete resection of GIST was reported as 48–70% depending on the risk of aggressiveness of the tumour. Many classifications were made to reassess the risk of aggressiveness of GIST (6,7). Boni et al. had reported in his series that despite new chemotherapeutic regime, to date only radical surgery offers the chance of long-term survival (8).

In our case, the tumour was completely resected with clear margin and intra- operatively the presence of nodes noted. The presence of tumour of more than 5 cm and nodes were the features of high risk tumour as highlighted in our patient. This is according to the assessment by Fletcher classification to assess the risk of aggressiveness in GIST (6). Based on this viewpoint, this patient had received an adequate treatment. He was not referred for adjuvant chemoradiotherapy as his tumour was not sensitive to these modalities. The study on the usage of new drug called imatinib mesylate is however still early and there are no clear guidelines on the usage of this drug (4). This patient is currently under close surgical follow-up.

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