Case 16239

An interesting case of multiple small bowel gastrointestinal stromal tumours
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Section: Abdominal imaging
Area of Interest: Abdomen
Procedure: Imaging sequences
Technique: CT
Special Focus: Neoplasia Case Type: Clinical Cases
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Patient: 57 years, female

Clinical History:

A 57 year old female presented to our institution with a longstanding history of anaemia. She denied any other symptoms. She underwent a capsule endoscopy which revealed a mid jejunal lesion. Subsequently, she underwent a CT entrography.

Imaging Findings:

CT entrography demonstrated multiple lesions in the small bowel, a large enhancing soft tissue density lesion in the mid segment of jejunum and a further well marginated lesion in the distal jejunum with rim calcification.

Discussion:

Gastrointestinal stromal tumours (GISTs) are the most common mesenchymal neoplasm of the gastrointestinal tract, comprising 1%-3% of all GI neoplasms. They commonly arise from the stomach (40%-60%) and small intestine (30%-40%). However, they can occur anywhere in the GI tract [1]. Although they can occur at any age, they have a higher incidence in the 6th and 7th decades [2]. GIST commonly presents as a solitary lesion. Presentation as multiple lesions is very rare and may be seen in patients with type 1 neurofibromatosis and familial GISTs [3]. Small tumours may be asymptomatic. However, larger tumours can present with a variety of symptoms based on their primary location [4]. Small bowel tumours may present with pain, palpable mass, obstructive symptoms, bleeding, early satiety and fever [5].

Tumours arising from the small bowel are considered more aggressive than GISTs arising from other parts of the GI tract as they tend to have high risk features such as larger tumour size, high mitotic count and possibility of metastatic disease [4, 6]. Common metastatic sites include liver, peritoneum and lungs [7]. Although small intestinal GISTs may be diagnosed incidentally during investigations for other clinical problems, multiple imaging modalities are available to assess and investigate these neoplasms. On the contrast-enhanced CT, they present as a well-defined soft tissue density lesion with homogenous peripheral enhancement and occasionally central necrosis. Calcification is not a common feature. CT is also a useful modality in evaluating the size of the tumour, local extension, metastatic disease and response to treatment [5].

On CT scan, small bowel GISTs may demonstrate similar features to more common intestinal neoplasms such as lymphoma and considering the lower frequency of their occurrence, they may not be considered as the initial diagnosis [4]. The use of MRI and PET scan is reserved to specific cases [5]. It is reported that MR features such as intralesional cystic change and a low mean ADC value may be useful in predicting the malignancy potential of these tumours [8]. Endoscopic biopsy may be performed to confirm the diagnosis. However, it is reported to have relatively low accuracy and the use is limited to certain cases but not small intestinal tumours [5]. Local resection with a 1-2cm margin is the treatment of choice for the small (<2cm) non-metastatic tumours.
However, in more complicated cases, extensive surgery may be required [4, 5]. Our patient underwent wedge resection of small bowel lesion and the histo-pathology result confirmed diagnosis of GIST.

Written patient consent obtained.

**Differential Diagnosis List:** Small bowel GIST, Adenocarcinoma, Carcinoid tumour, Lymphoma, Leiomyosarcoma, Leiomyoma, Adenoma

**References:**


Description: Axial CT demonstrating an enhancing lesion in the mid jejunum. Origin: Radiology department, Bangor Hospital, North Wales, UK.
Description: Coronal CT demonstrating an enhancing lesion in the mid jejunum. Origin: Radiology department, Bangor Hospital, North Wales, UK.
Description: Sagittal CT demonstrating an enhancing lesion in the mid jejunum. Origin: Radiology department, Bangor Hospital, North Wales, UK
Figure 2

Description: Axial CT showing a well defined soft tissue density lesion with rim calcification

Origin: Radiology department, Bangor Hospital, North Wales, UK
Description: Coronal CT showing a well defined soft tissue density lesion with rim calcification

Origin: Radiology department, Bangor Hospital, North Wales, UK
Description: Sagittal CT showing a well defined soft tissue density lesion with rim calcification  

Origin: Radiology department, Bangor Hospital, North Wales, UK