Case Report:
Role of RBC labeled 99m-Tc scan, Histopathology and Immunohistochemistry in Diagnosis of Jejunal Gastrointestinal Stromal Tumor presenting as obscure gastrointestinal haemorrhage

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Abstract:
Gastrointestinal stromal tumors (GIST) are relatively rare tumors of gastrointestinal (GI) tract, most commonly arise from the stomach followed by small intestine and colon, clinically GIST present with occult GI bleeding, abdominal pain and intestinal obstruction. We present a case of a jejunal GIST, which presented as an obscure GI haemorrhage. This case highlights how oesophagogastroduodenectomy and colonoscopy proved inconclusive in determining source of bleeding and the importance of RBC labeled 99m-Tc scan in detecting the source of GI bleeding and also emphasizes on histopathology and immunohistochemistry in diagnosis of GIST.

Key Words: Gastrointestinal stromal tumor; RBC labeled 99m-Tc scan; Immunohistochemistry

Case Report:
A 75 years old male presented to surgical gastroentrology department with 3-4 days history of passing black colored stools, no history of abdominal pain/vomiting/hematemesis. He had no significant previous medical history. Clinical examination revealed pallor and his blood test showed a hemoglobin level of 7.3g/dl, his peripheral smear showed microcytic hypochromic anemia consistent with iron deficiency. Hemospot test (standard guaiac method) for stool revealed positive for occult blood. An oesophagogastroduodenoscopy was done and showed mild gastritis, colonoscopy was done upto distal 10 cms of ileum revealed stools mixed with dark-red blood suggestive of small bowel bleed. Since the GI bleeding was obscure patient was asked to under go RBC labeled 99m-Tc scan and multiple images were taken over a period of 5 hours which revealed accumulation of labeled RBC’s in the small bowel at 1.5 hours and passing along large intestine in subsequent images, which suggested slow active Gastrointestinal (GI) bleed form small bowel probably from Jejunum. (Figure1)
Figure 2: Gross Photo of segment of jejunum with a well-circumscribed gray white, lobulated tumor in the jejunal wall. Grossly jejunal segment measured 11 cms, out surface antimesentric border showed a boursulated mass 4 cms from one resected margin, on cut opening jejunum lumen showed blood colts, mucosal surface covering the tumor showed irregularities, however no frank ulceration was seen on gross examination. On sectioning, jejunal wall showed a well-circumscribed gray white, smooth, lobulated tumor measuring 3.5x3.5 cms with whorled-appearance. (Figure 2)

Microscopy: Jejunal mucosa showed erosion, submucosa shows tumor extending up to serosa with pushing borders, tumor showed fascicles of spindle cells with bipolar nucleus and eosinophilic cytoplasm with 3 mitosis/50 hpf, there was no evidence of necrosis and resected margins were free of tumor. (Figure 3)

On Immunohistochemistry tumor cells showed wide spread positively for CD117 and negative for S100 protein. (Figure 4)
References:


