# CASE OF ABDOMINAL PAIN WITH HEMOPERITONEUM IN A YOUNG FEMALE

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# CASE REPORT

A 28 year old female patient presented to Casualty with complaints of

- Upper Abdominal pain for 1 day.
- Nausea .
- Vomiting –3 episodes,non projectile,non-bilious.
- No history of fever , bowel or bladder disturbances,
- No h/o haematamesis,malena.
- Menstual History- Regular Menstual cycle.

LMP- 9/9/2019.

# CASE REPORT

- On Examination :

  Afebrile

  Pulse-96 /min

  BP-130/90 mmhg

  Pallor +

- Per Abdomen Examination:

  Generalised Tenderness was present all over the abdomen.

  No guarding or rigidity.

  No abdominal distension.

  No lump palpable.

  Bowel sounds- present in all quadrants

# INVESTIGATION

- **Blood Investigation**

  Hb-6.8 gm

  TLC- 7600

  BLOOD GROUP- B POSITIVE

  LFT- WNL

  RFT- WNL

  X-ray Erect abdomen- WNL

- **Outside USG abdomen and pelvis**

Sub-optimal scan due to bowel gases and severe probe tenderness over liver area.

An ill-defined Heteroechoic lesion in the Right lobe of liver with approximate size 8 * 7.7 * 7.6 cms showing Peripheral Vascularity suggestive of Liver Abscess .

Gall bladder was well distended displaced by the lesion in the liver.

Moderate Ascites.

Evidence of moderate amount of free fluid noted in peri-GB space, Hepato-renal space and in the pelvis.

# INVESTIGATION

- **Ultrasonography abdomen pelvis:**

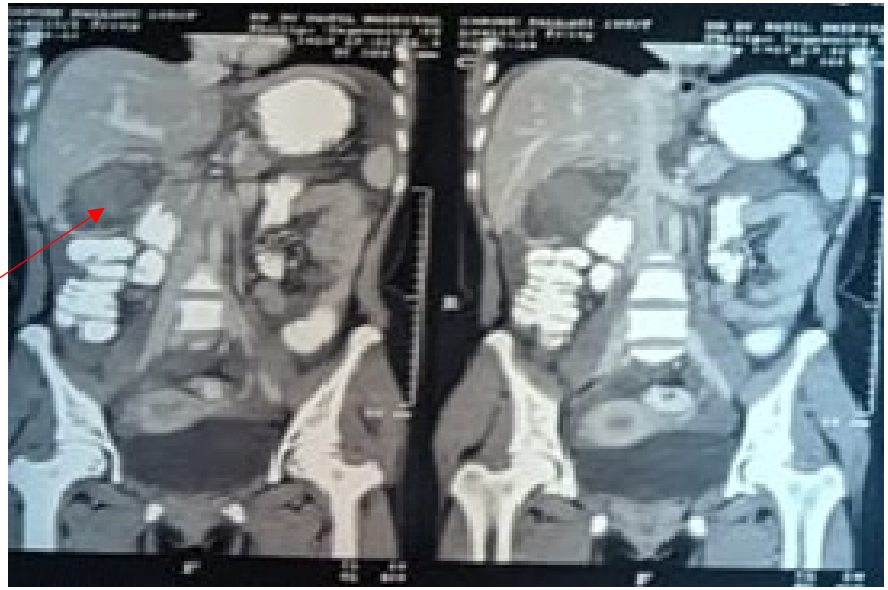
Liver- normal in size

A large heterogenous lesion measuring 13.5 * 7.5 * 8.5 cm was seen displacing the gall bladder anteriorly with internal vascularity along with turbid ascites.

Free fluid was noted in the peri-hepatic, peri-splenic, Morrison's pouch,inter-bowel loops and pelvis s/o moderate ascitis

Suggest CECT abdomen & Pelvis for further evaluation.

# CECT SCAN




**CECT Abdomen and Pelvis**

A neoplastic mass (mostly exophytic) arising from second part of duodenum with intra-tumoral hemorrhage , intra-peritoneal rupture with resultant hemoperitoneum needs consideration – GIST is likely

# CECT ABDOMEN AND PELVIS

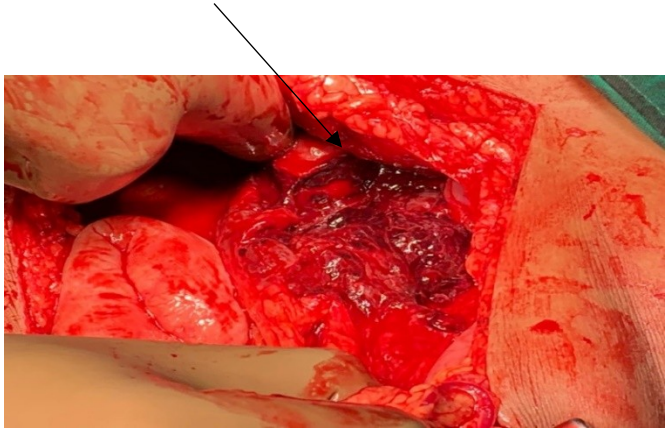
- A large well-defined solid lesion with lobulated outline anterior to right kidney,posterior to Gall bladder, lateral to 2nd part of duodenum and medial to medial surface of right hepatic lobe measuring 79x64x75mm(APxTRxCC).Its central portion appears hyperdense(CT value=55-66 HU) and measuring 42x41mm likely to represent haemorrhage.
- Discontinuity in its enhancing wall was noted along postero-lateral and antero medial margin of lesion- likely to be rupture.
- The mass is compressing and displacing gall bladder anteriorly.It is in relation to lateral wall of 2nd part of duodenum which showed mild thickening and distortion of mucosal folds.
- No intra-luminal extension was noted**.Second part of duodenum is compressed and displaced medially**.
- Moderate ascites noted with fluid in the peri-hepatic and peri-splenic region,Morrison's pouch, right and left para-colic gutter and pelvis **without free air**.

# MANAGEMENT

- Blood Transfusion 3 pcv preoperatively and intraoperatively.
- Exploratory Midline Laparotomy.

**Intra-operative findings:**

- Frank Hemoperitoneum approximately 800ml was present and tumour was breached at superomedial aspect before exploration.
- A tumour of approximately 8 * 7 * 4 cm was present on the lateral wall of duodenum at junction of $D_1$ and $D_2$. The tumor was exophytic with a sessile base.
- The tumor was firm in consistency with no invasion into the surrounding without any evidence of metastases or lymphadenopathy.

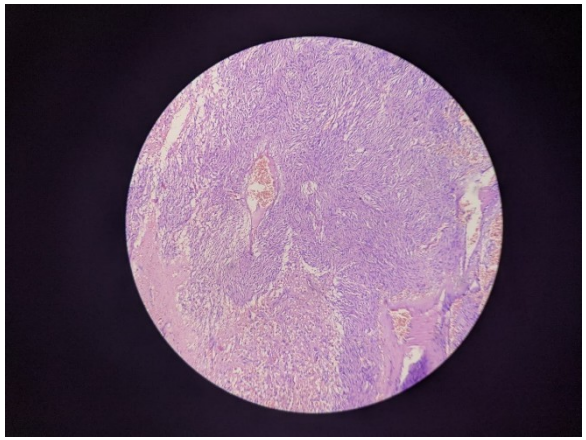


A massive hematoma attached to the mass was removed.

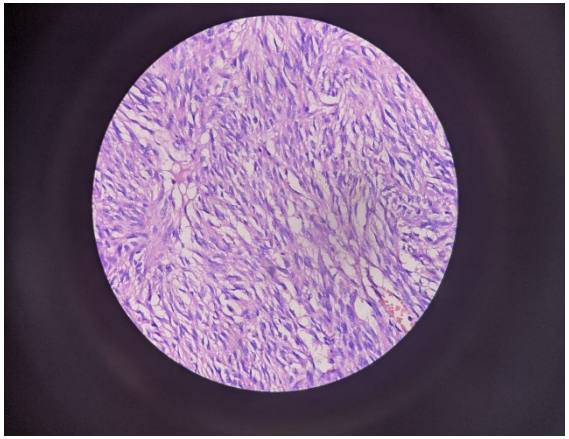
# MANAGEMENT

- Enbloc resection of ruptured GIST with Wedge resection of the lateral wall of duodenum($D_2$),with 1cm free margin .
- The defect in the lateral wall of duodenum was closed in layers using PDS 3-0 .(polydioxanone)
- The patient was discharged in stable condition on POD-15.
- Started on TABLET IMATINIB MESYLATE 400mg HS for 2years after oncophysician Consultation.

- **Macroscopic-**excised specimen revealed a 9*8*5 cm sized neoplasm .
- **Microscopic-**spindle cells with large vascular spaces and large areas of necrosis and epitheloid cells.

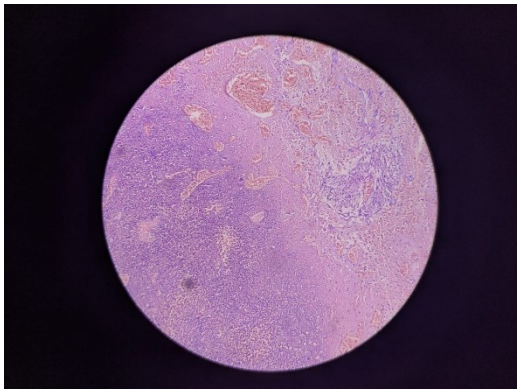


Spindle cells with large vessel and necrotic area. 10x H&E



Spindle cells at 40x H&E

# HISTOPATHOLOGICAL EXAMINATION REPORT



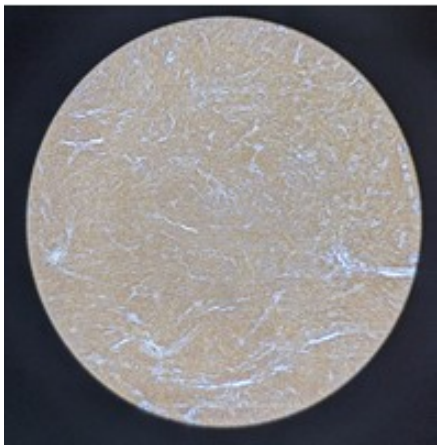
Large Haemorrhagic and necrotic area. 10x H&E

- **IHC-**

  Mitotic Index 2-3/10 hpf

  CD117 - Positive

  SMA- Negative.



CD 117 -positive

# DISCUSSION

- Gastrointestinal stromal tumors (GISTs) are uncommon tumors, accounting to < 1 % of all GI tract tumors.
- Rare Gatrointestinal mesenchymal tumor.
- The cell of origin of these tumors is pluripotent mesenchymal stem cell programmed to diffenrentiate into Interstitial Cells of Cajal. (pacemaker cells of GIT).
- It can be benign or malignant. 30% of GIST exhibit malignant behaviour- such as metastasis and infiltration.
- They are most common Mesenchymal Smooth Muscle tumors which can arise anywhere in the GI tract

➢ Stomach (about 60%),

➢ Small bowel (about 25%),

➢ Colon and rectum (about 10%),

➢ Duodenum (only 3–5%).

# DISCUSSION

- Duodenal GIST relatively have low incidence and the unique anatomy around the Pancreaticoduodenal region makes its diagnosis challenging.[5]

| DUODENAL PORTION | FREQUENCY(%) |
|---|---|
| FIRST | 5-25% |
| **SECOND** | **33-64%** |
| THIRD | 22-42% |
| FOURTH | 8-21% |

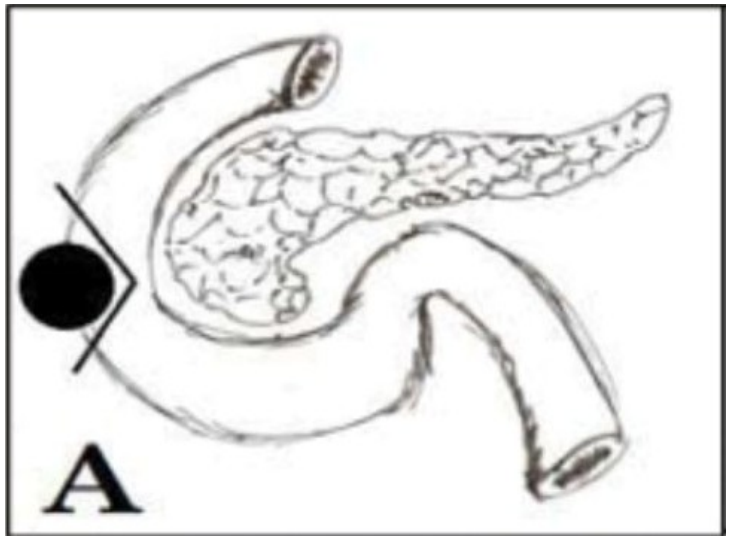
- Most frequently involve the second part of duodenum.[6]

# DISCUSSION

- Excision is the treatment of choice for GIST.

Tumor located on the lateral wall of 2nd portion of duodenum.

Local Wedge Resection with primary closure of the duodenal wall. [6]



# DISCUSSION

- Immunohistochemistry-is conclusive in determining the histology of the tumor, based on proto-oncogene C-Kit (CD 117) and CD 34. [3]
- Post-operative targeted molecular therapy -The drug of choice is Imatinib mesylate 400mg/day (tyrosine kinase inhibitor ) for 12 months. [4]

# CONCLUSION

- GIST in the Duodenum is rare and majority is sporadic and 10% familial and most are incidental diagnosis.

- GIST occurs more common in males as compared to females, both in the fifth and sixth decades of life,which made this case an unusual occurrence.

- Surgical excision is the mainstay treatment modality for localized or potentially resectable GIST.

- Prognosis depends on size, mitotic count and Ki 67 index.[1]

- Most express CD 117 and targeted adjuvant therapy with Imatinib Mesylate following R0 resection is extremely successful.

# TAKE HOME MESSAGE

- GIST in the small intestine should be included in the differential diagnosis in young adult presenting with abdominal pain and hemoperitoneum.
- Spontaneous tumor rupture or during excision denotes a high risk independent of any other prognostic factors.[2]
- A successful outcome requires muti-disciplinary approach,post-operative targeted molecular therapy in intermediate and high risk groups.
- Long term followup with CECT SCAN every 3-6 month is the recommended surveillance protocol.[4]

# REFERENCES


1. Sashidharan P, Matele A, Matele U, Al Felahi N, Kassem KF. Gastrointestinal stromal tumors: a case report. *Oman Med J*. 2014;29(2):138–141. doi:10.5001/omj.2014.34

2. Shrikhande SV, Sirohi B, Barreto SG, et al. Indian Council of Medical Research consensus document for the management of gastrointestinal stromal tumors. *Indian J Med Paediatr Oncol*. 2014;35(4):244–248. doi:10.4103/0971-5851.144983

3. Manxhuka-Kerliu, S., Sahatciu-Meka, V., Kerliu, I. *et al.* Small intestinal gastrointestinal stromal tumor in a young adult woman: a case report and review of the literature. *J Med Case Reports* **8,** 321 (2014) doi:10.1186/1752-1947-8-321

4. Shahaji G. Chavan , Sagar R. Ambre , Vinayak kshirsagar, Ashish Vashistha. Case Report Rare Case Of Small Bowel GIST . International Journal of Scientific & Engineering Research, Volume 7, Issue 5, May-2016 282 ISSN 2229-5518 IJSER © 2016

5. Liu, Z., Zheng, G., Liu, J. *et al.* Clinicopathological features, surgical strategy and prognosis of duodenal gastrointestinal stromal tumors: a series of 300 patients. *BMC Cancer* **18,** 563 (2018).

6. Beltrán MA. Current Management of Duodenal Gastrointestinal Stromal Tumors. Clin Oncol. 2016; 1: 1156.

# THANK YOU