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**ATYPICAL HEMANGIOMA OF LIVER
MIMICKING HEPATOCELLULAR CARCINOMA
A DIAGNOSTIC DILEMMA**

**UNIT III
DEPARTMENT OF GENERAL SURGERY
DR DY PATIL MEDICAL COLLEGE AND HOSPITAL, PUNE**

INTRODUCTION

- Hepatic hemangioma is the most common asymptomatic, and incidentally diagnosed benign neoplasm of the liver.
- Incidence is 0.4% to 20%
- An atypical hemangioma is a rare variant of hepatic hemangioma that lacks the characteristic imaging features of typical hemangioma, it is difficult to distinguish and can be confused with Hepatocellular carcinoma.

CASE HISTORY

46 year old male came to OPD with complaints of –

Pain in upper abdomen since 3 months- dull aching, aggravated on lying down position.

- No history of nausea, vomiting, fever.
- No history of jaundice.
- Denies history of alcohol intake.
- No history of loss of weight.
- No history of trauma to the abdomen.
- No history of any bowel irregularities
- No history of similar complaints in the past

GENERAL PHYSICAL EXAMINATION

- Patient was conscious, cooperative and well-oriented to time place and person.
- The patient was examined in broad daylight after due consent and adequate exposure.
- On examination-
- Temperature- 98 degree Fahrenheit
- Pulse- 84/min
- Blood pressure- 110/70 mmHg
- No evidence of pallor icterus, cyanosis, clubbing, oedema feet , or generalized lymphadenopathy.

PER ABDOMEN EXAMINATION

❑ INSPECTION

- Umbilicus is central and inverted
- Non distended
- All quadrants of the abdomen move equally with respiration
- No visible fullness, scars, or dilated veins over the abdomen.

❑ PERCUSSION

- Liver span is 12cm in the mid axillary line
- No evidence of free fluid in abdomen

❑ PALPATION

- Soft
- Tenderness was present in epigastrium
- No palpable lump
- No organomegaly

❑ AUSCULTATION

- Normal bowel sounds heard in all quadrants

INVESTIGATIONS

- HB- 14.2 g/dL
- WBC- 9800 /mcgL
- PLATELETS- 297000 /mcgL
- LFT-
 - TOTAL BILIRUBIN- 0.63 mg/dL
 - CONJUGATED – 0.25 mg/dL
 - UNCONJUGATED – 0.38 mg/dL
 - ALP- 81 U/L
- Sr. Creatinine – 0.91 mmol/L
- Sr. Urea- 21 mmol/L
- HIV - NON REACTIVE
- HCV – NON REACTIVE
- HBsAG – NON REACTIVE
- PT- 11.7 seconds
- INR – 1.01

USG (ABDOMEN & PELVIS)

7.5 x 5.5 x 5 cm space-occupying lesion in left lobe of liver.

CECT --TRIPHASIC (ABDOMEN & PELVIS)-



- Liver normal in size & non cirrhotic
- A well-defined irregularly margined lesion measuring 8 x 5 x 6 cm is noted in the segment II & III of liver.

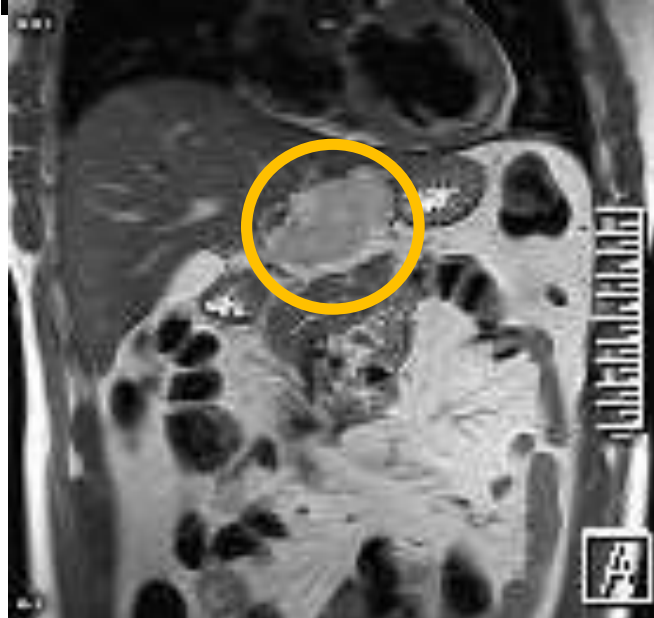
Findings-

- **Atypical Hepatic hemangioma.**
- **? Neoplastic Etiology**



- **Considering the neoplastic etiology**
HRCT CHEST was done- **NORMAL**

MRI (ABDOMEN & PELVIS)



- Non cirrhotic liver
- A well-defined, lobulated & irregularly marginated, lesion measuring 8 x 5 x 6.6 cm in left lobe of liver -segment II & III
- **Findings suggestive of fibrolamellar Hepatocellular Carcinoma.**

DILEMMA STILL PERSISTS !!!

- After CECT and MRI Tumour markers were assessed-
 - **Alpha-fetoprotein – 34.4 (Normal)**
 - **CA-19.9 – 2.21 (Normal)**
 - **CEA- 1.61 (Normal)**

ROLE OF BIOPSY

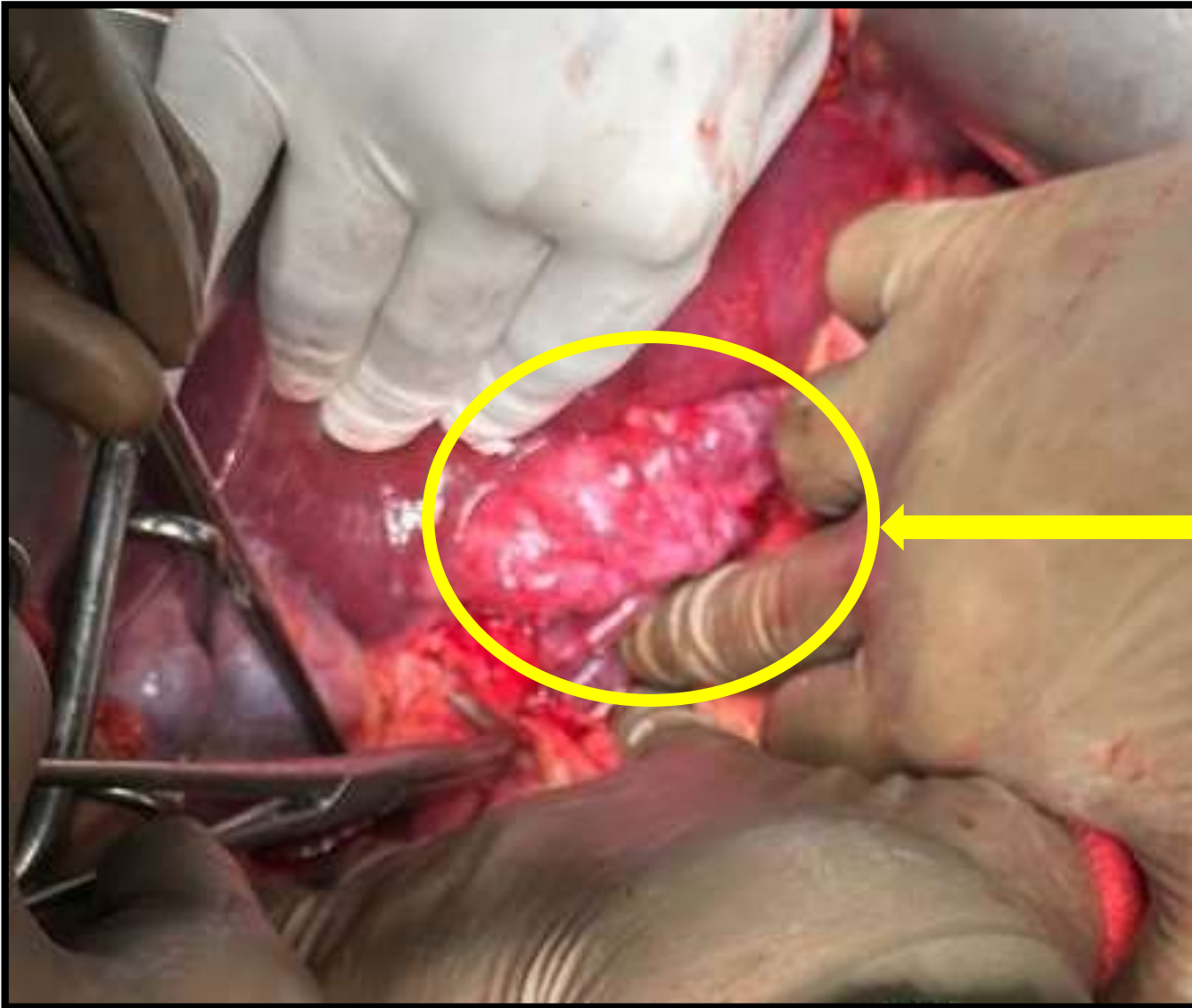
- Hemangiomas are Hypervascular Benign Tumours of the Liver so any attempt if made to take a biopsy can lead to torrential bleeding.
- Secondly the main reason to avoid Biopsy in HCC is that it is always associated with adverse events and has an impact on diagnosis and therapeutic pathway



**Considering the CECT & MRI findings, size of tumour,
the segment it occupied and dilemma in diagnosis
patient was posted for left hepatic resection**

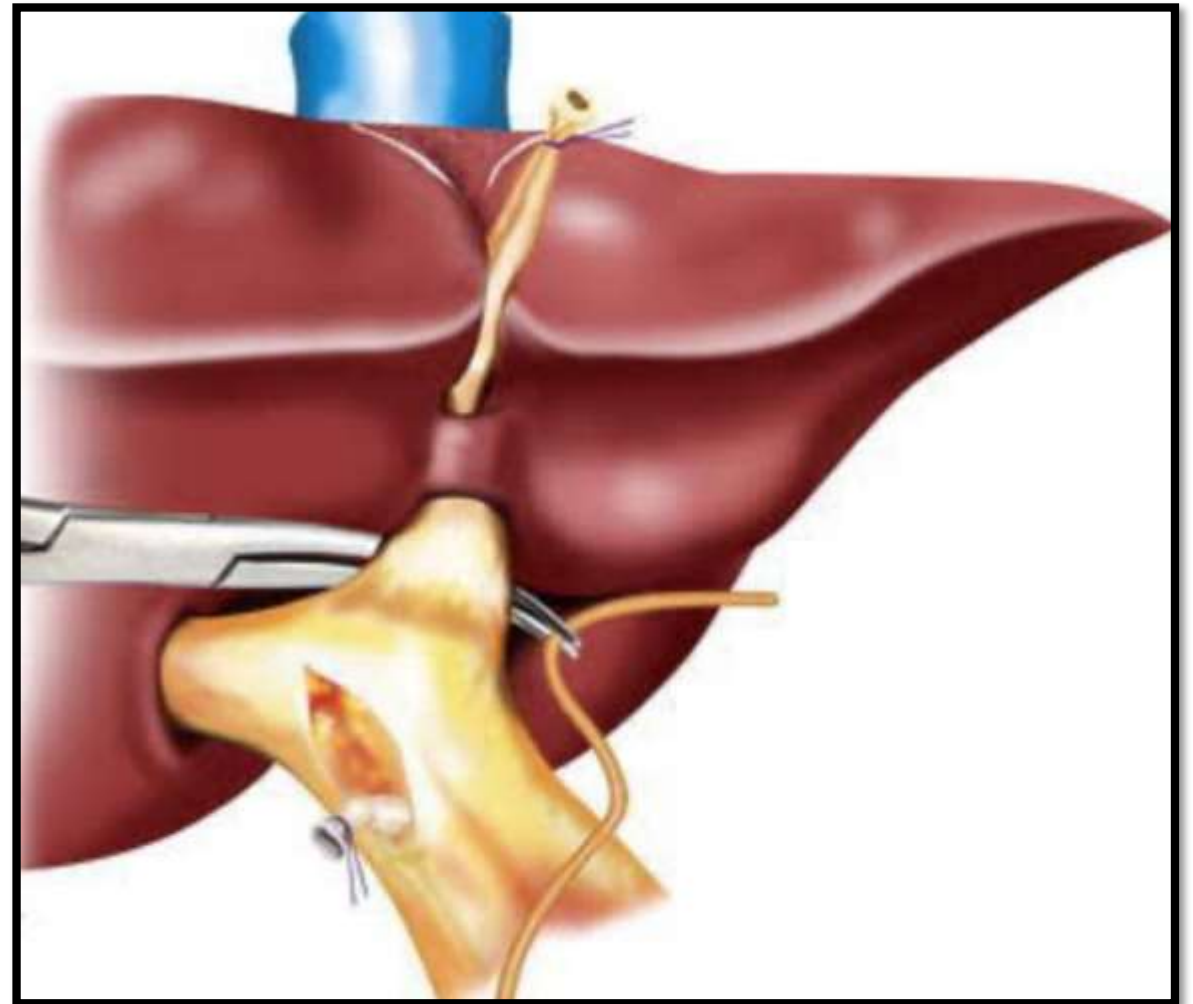
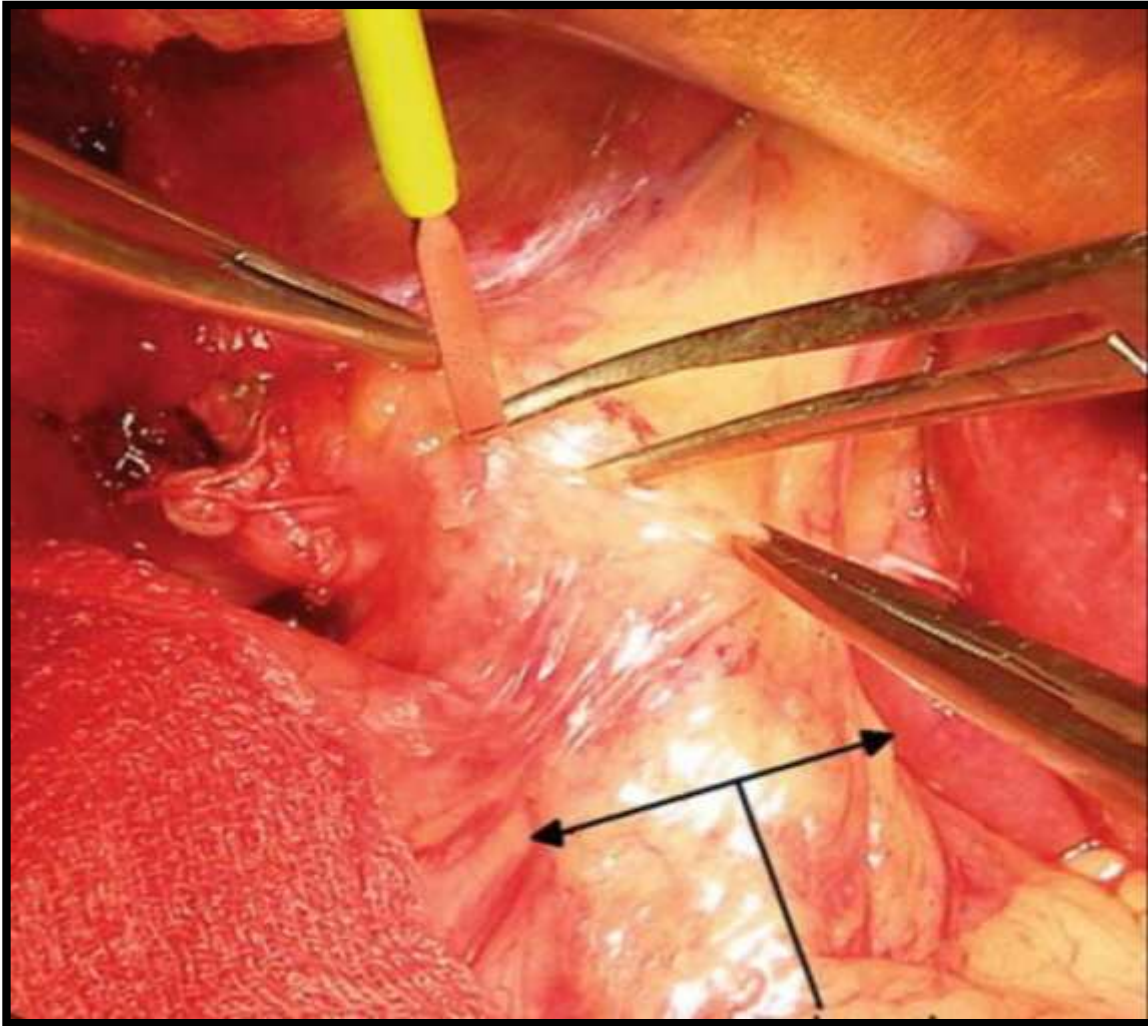


INTRAOP IMAGES

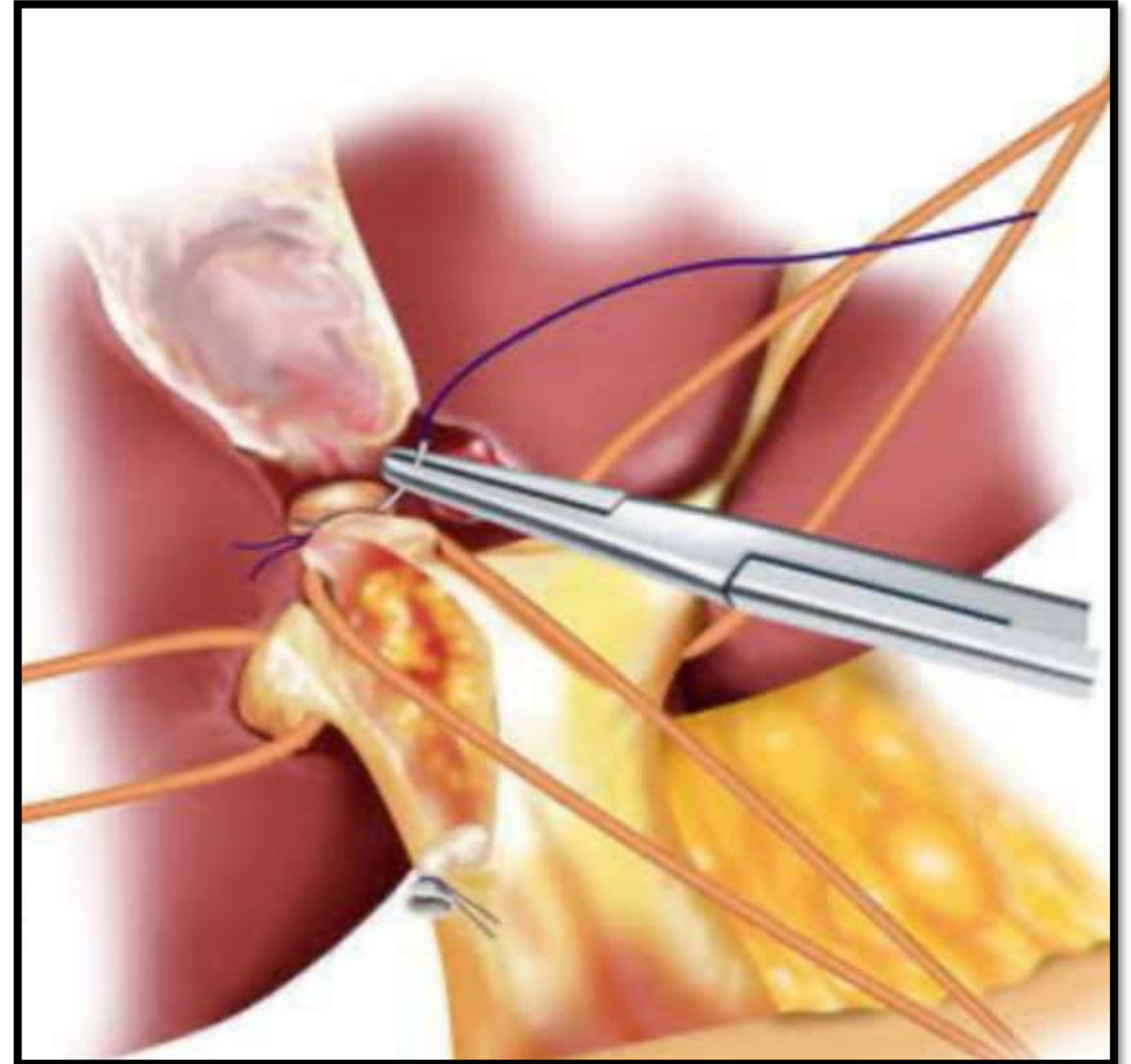
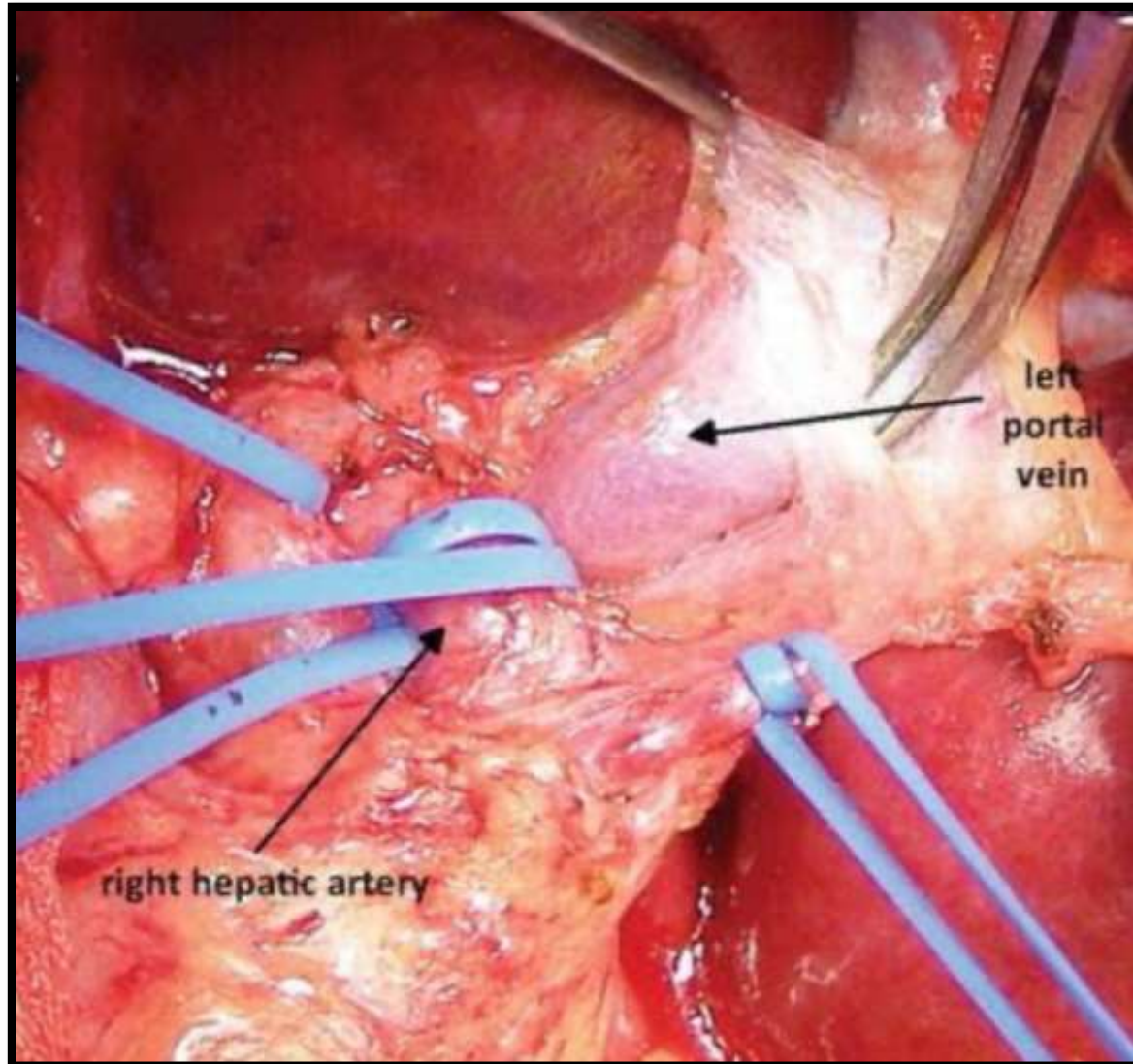


A large exophytic tumour
arising from segment 2 &
3 of left lobe of liver

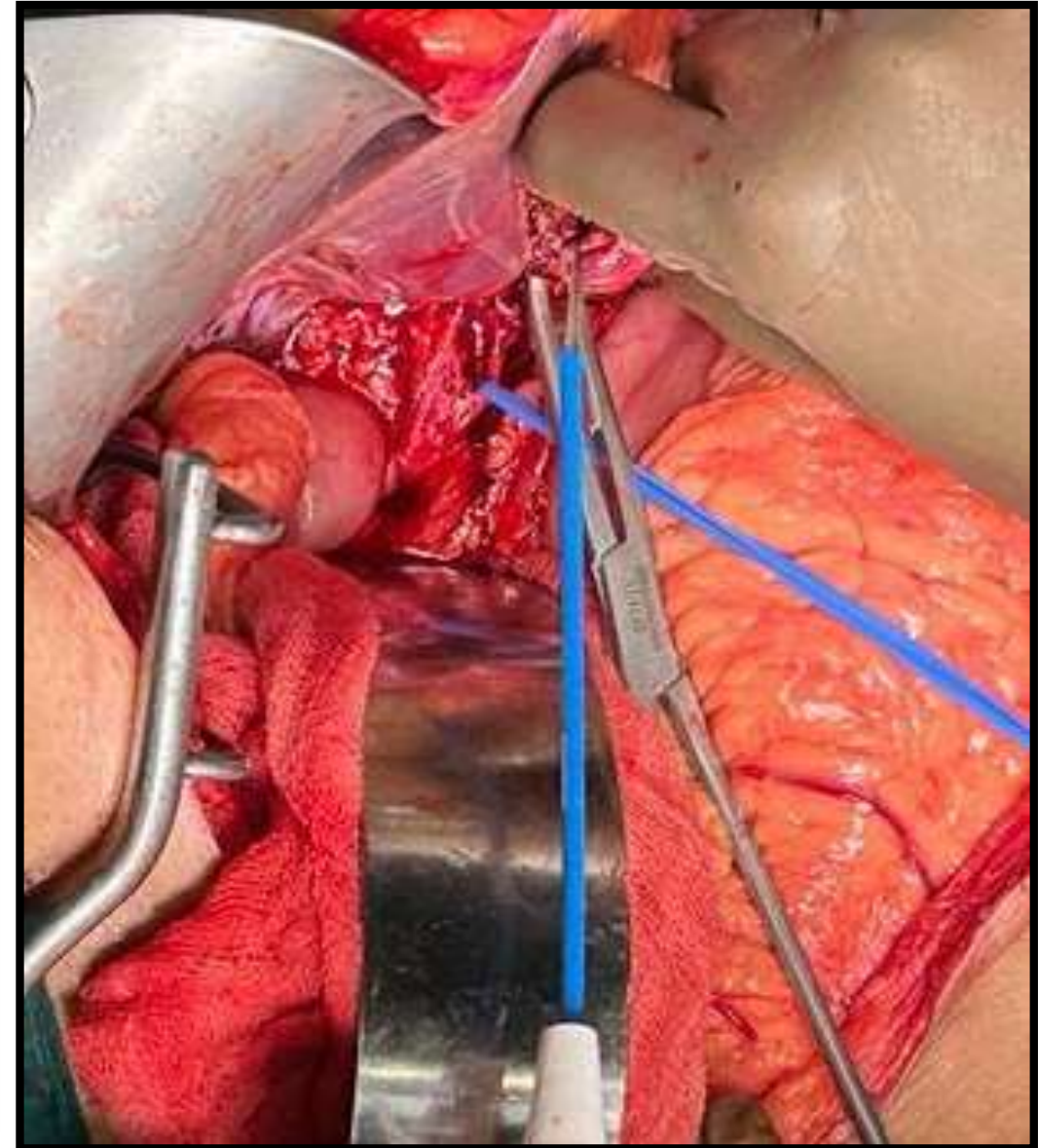
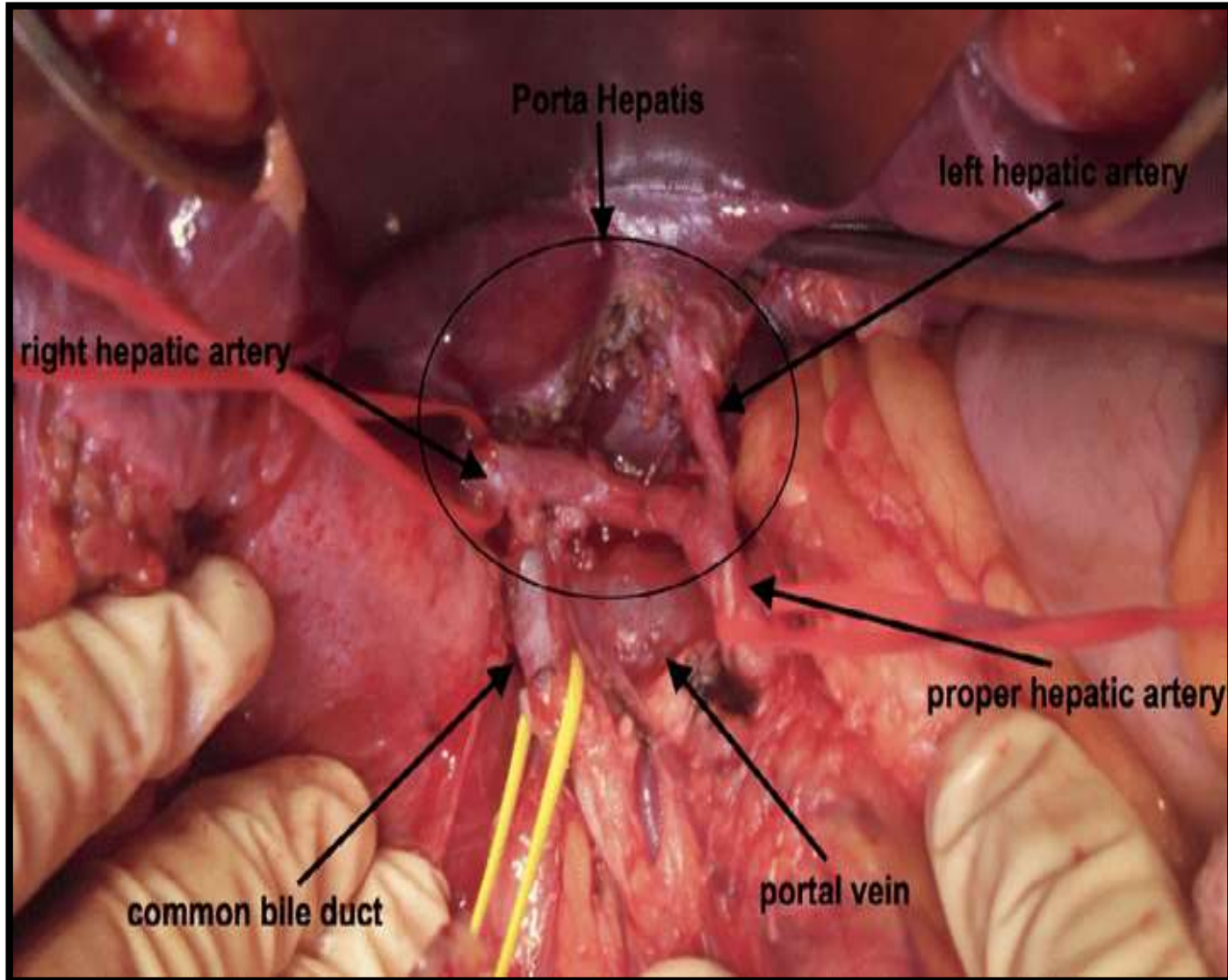
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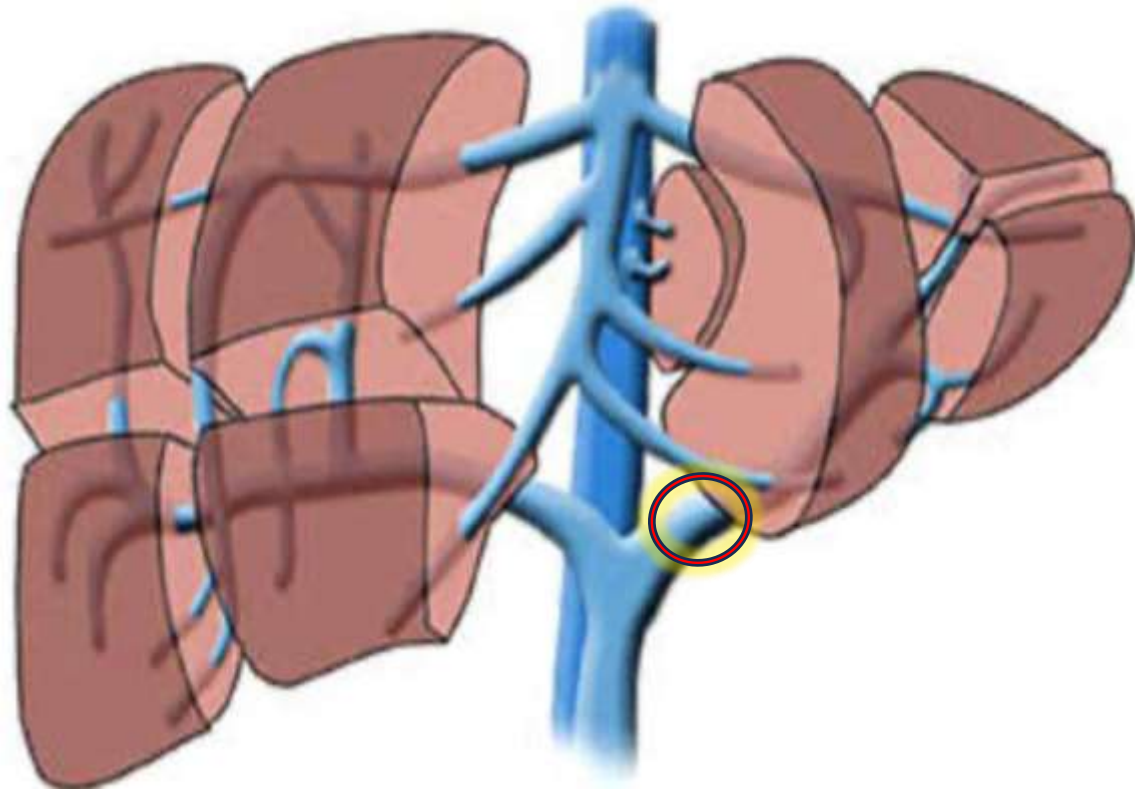
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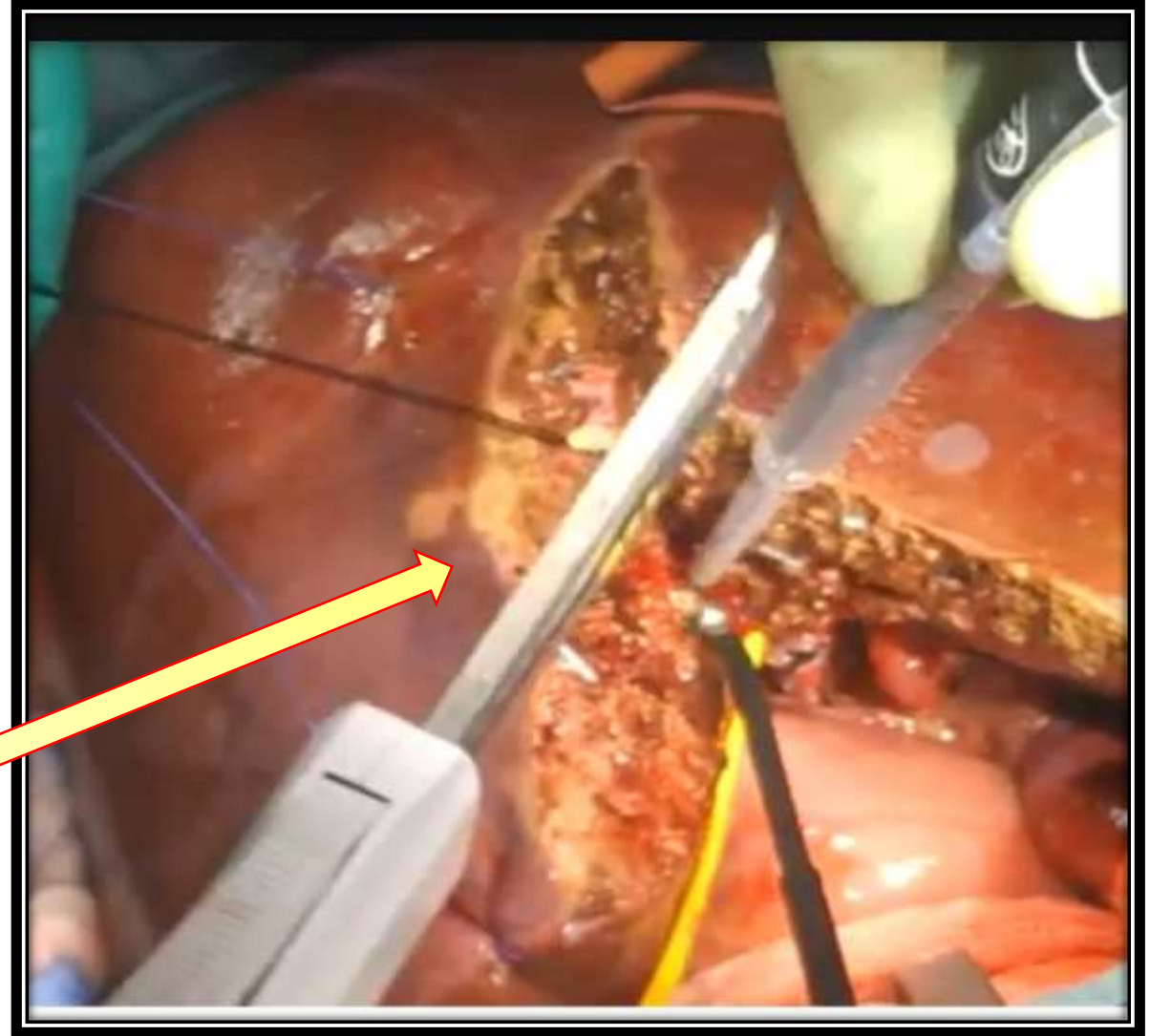
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PARENCHYMAL TRANSECTION (FINGER FRACTURE & HARMONIC)

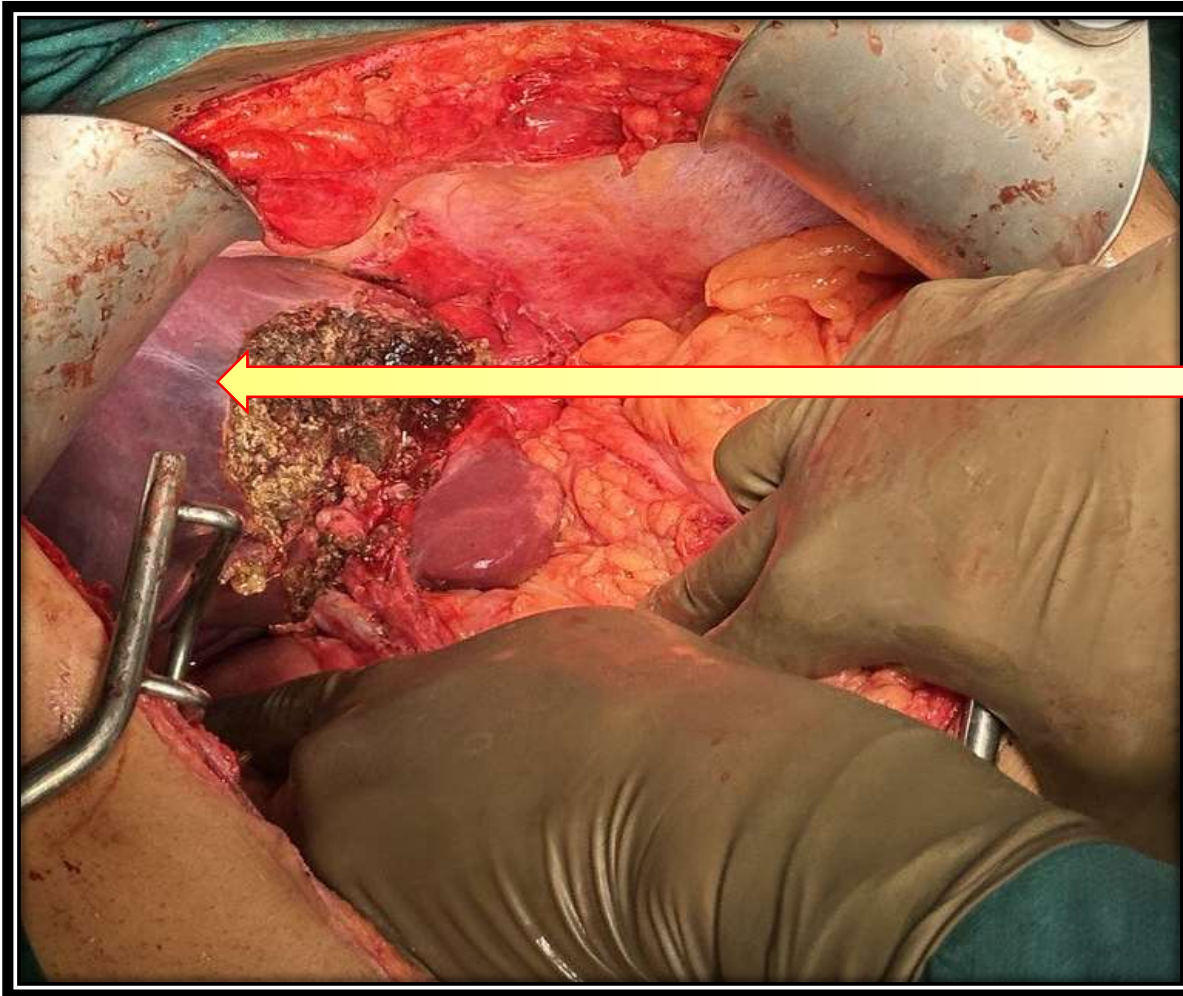


Line of demarcation



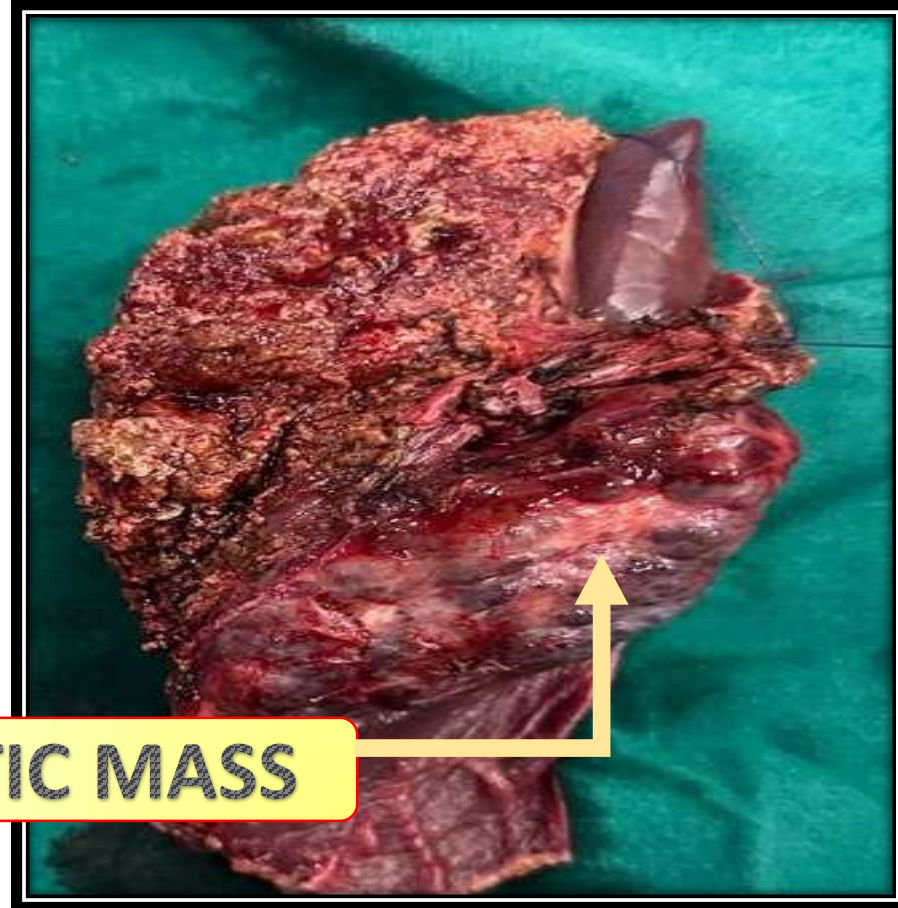
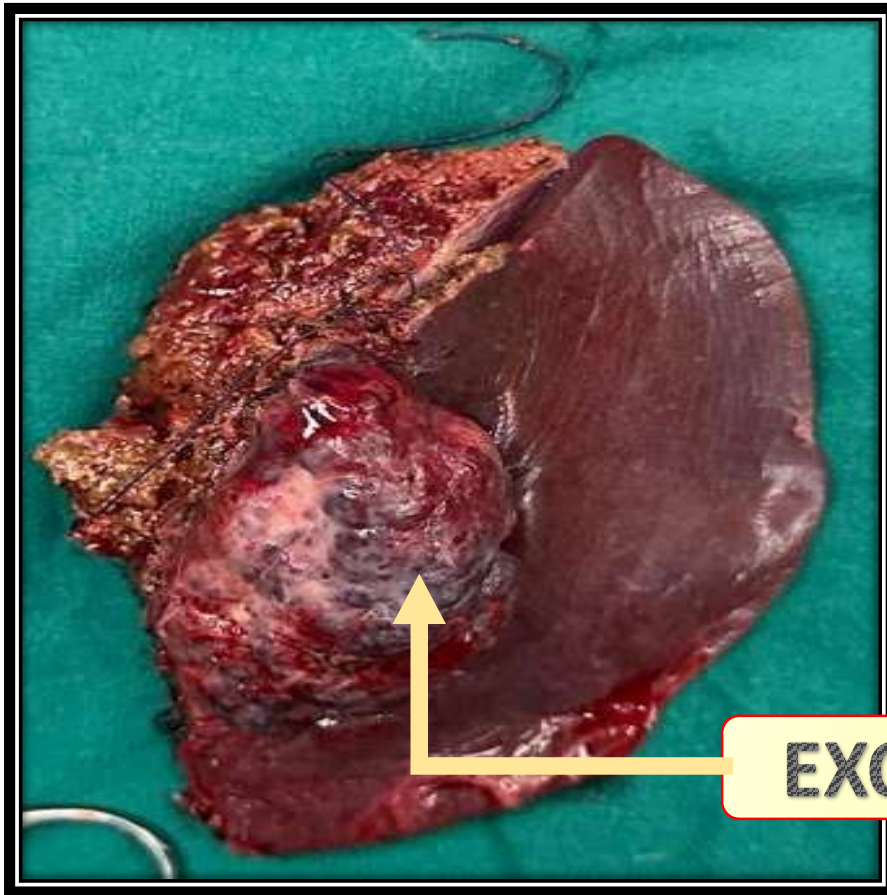
AFTER COMPLETION OF LEFT HEPATECTOMY

SEGMENTS II III & IV RESECTED



Line of demarcation

EXCISED SPECIMEN



EXOPHYTIC MASS

HISTOPATHOLOGIC EXAMINATION

Suggestive of CAVERNOUS HEMANGIOMA

DISCUSSION

FEATURES	HEPATOCELLULAR CARCINOMA	ATYPICAL HEMANGIOMA
Origin	From Hepatocytes	From blood vessels within the liver
Nature	Malignant	Benign
Risk Factors	Chronic liver disease (e.g., hepatitis B or C infection, cirrhosis)	Typically occurs in individuals without underlying liver disease
Serum Biomarkers	Elevated alpha-fetoprotein (AFP)	Normal AFP level
Adjacent Liver Parenchyma	Cirrhotic background, may have associated liver nodules	Normal liver parenchyma or may be seen in non-cirrhotic live
Size	Can vary widely, often larger lesions >2 cm	Usually smaller lesions, may be <2 cm
Enhancement Pattern	Arterial enhancement followed by washout in portal venous or delayed phases	Variable enhancement patterns, may demonstrate early enhancement similar to HCC but without washout pattern
Capsule	Absent or incomplete peripheral rim enhancement	Absent or incomplete peripheral rim enhancement

METHODS OF LIVER TRANSECTION

1. Finger Fracture or Clamp Crushing
2. Water Jet Transection
3. The Cavitron Ultrasonic Surgical Aspirator (CUSA)
4. Ligasure / Harmonic scalpel
5. Vascular Staplers

TAKE HOME MESSAGE

- Hemangioma is the most common benign liver tumour
- Atypical hemangioma is a rarest form of hemangioma which mimics hepatocellular carcinoma.
- In presence of hepatic cirrhosis the diagnosis of HCC would have been made, but in our case because it was exophytic and large size haemangioma there was a dilemma of diagnosis even on operation table.
- Surgery is indicated in hemangiomas when it is symptomatic, when its increasing in size , Diagnostic uncertainty, impending rupture of hemangioma.
- The trick of the trade during liver resection is to have a good inflow and outflow control to minimise the bleeding and low CVP to be maintained during surgery.

REFERENCES

1. ["Three-dimensional Anatomy of the Couinaud Liver Segments"](#). Retrieved 2009-02-17.
2. European Association for the Study of the Liver (EASL) EASL Clinical Practice Guidelines on the management of benign liver tumours. *J Hepatol*. 2016 Aug;65((2)):386–98. - [PubMed](#)
3. Stark DD, Felder RC, Wittenberg J, Saini S, Butch RJ, White ME, et al. Magnetic resonance imaging of cavernous hemangioma of the liver: tissue-specific characterization. *AJR Am J Roentgenol*. 1985 Aug;145((2)):213–22. - [PubMed](#)
4. Suriawinata AA, Thung SN. Malignant liver tumors. *Clin Liver Dis*. 2002 May;6(2):527-54, ix. doi: 10.1016/s1089-3261(02)00005-3. PMID: 12122869.
5. Karhunen PJ. Benign hepatic tumours and tumour like conditions in men. *J Clin Pathol*. 1986;**39**:183–8.
6. Mungovan JA, Cronan JJ, Vacarro J. Hepatic cavernous hemangiomas: lack of enlargement over time. *Radiology*. 1994;**191**:111–13
7. Stephens DH, Johnson CD. Benign masses of the liver. In: Silverman PM, Zeman RK, editors. *CT and MRI of the liver and biliary system*. Fishman EK, series editor. Contemporary issues in computed tomography. Vol. 12. New York: Churchill Livingstone; 1990. pp. 93–127.
11. Sarpel U, Bonavia AS, Grucela A, Roayaie S, Schwartz ME, Labow DM. Does anatomic versus nonanatomic resection affect recurrence and survival in patients undergoing surgery for colorectal liver metastasis? *Ann Surg Oncol*. 2009;16:379-384
12. Man K, Fan ST, Ng IO, Lo CM, Liu CL, Wong J. Prospective evaluation of Pringle maneuver in hepatectomy for liver tumors by a randomized study. *Ann Surg*. 1997;226:704-711, discussion 711-713
13. Fan ST, Lai EC, Lo CM, Chu KM, Liu CL, Wong J. Hepatectomy with an ultrasonic dissector for hepatocellular carcinoma. *Br J Surg*. 1996;83:117-120
14. Schemmer P, Bruns H, Weitz J, Schmidt J, Büchler MW. Liver transection using vascular stapler: a review. *HPB (Oxford)*.

A photograph of a man in a blue polo shirt holding a baby. The man is looking down at the baby with a gentle expression. The background is a blurred cityscape. The text 'THANK YOU' is overlaid in a blue, sans-serif font on the left side of the image. A solid blue bar is at the bottom of the page.

THANK YOU