

**Fig. 21.44:** Hepatosplenomegaly is the common condition (clinical entity). It is due to macronodular cirrhosis with portal hypertension, lymphoma, autoimmune diseases, congestive cardiac failure, hepatoma with portal hypertension, haemolytic diseases, etc. There may be ascites, supraclavicular palpable lymph node, pleural effusion (right sided).

adherent posteriorly; In pylorus mass, all margins are well felt which is mobile with features of gastric outlet obstruction; Mass from the body of the stomach is horizontally placed without any features of obstruction; Mass from the upper part of the stomach near the O-G junction causes dysphagia. Mass from the fundus of the stomach is in the upper part of the epigastric region towards left side. Carcinoma stomach is nodular and hard. It is commonest cause for stomach mass. Leiomyoma of stomach is smooth and firm.

#### *Pseudocyst of the Pancreas*

Mass lies in the epigastric region which is smooth, soft, does not move with respiration, not mobile, resonant on percussion. It can be tender if it gets infected, has got transmitted pulsation. It is confirmed by placing the patient in knee-elbow position. Lower border is well felt but upper border is not clear.

**Baid test:** Because stomach is pushed forwards, Ryle's tube when passed, can be felt per abdomen on palpation.

Pseudocyst of the pancreas is quite common condition. It has got a false capsule not true capsule as there is no epithelial lining. It usually occurs in 3 weeks after an attack of acute pancreatitis. Lesser sac is the common site. It also can occur in relation

#### **Management of gastric carcinoma**

Early growth—pylorus—lower radical gastrectomy with removal of tumour, proximal 5 cm clearance, nodal clearance, greater and lesser omentum, distal pancreas and spleen (now not regularly removed; it is removed to clear splenic nodes—one of the node stations) and Billroth II anastomosis or Roux-en-Y anastomosis is done. Postoperatively adjuvant chemotherapy should be given—5 fluorouracil, mitomycin, epirubicin, cisplatin.

Growth in body, proximal growth, diffuse carcinoma and generalised linitis plastica are the indications for total radical gastrectomy with oesophagojejunal anastomosis. Neoadjuvant chemotherapy in advanced gastric cancer prior to surgery and later gastrectomy.

Instillation of mitomycin C impregnated charcoal intra-peritoneally to control lymphatic disease (Japan).

Palliative procedures like palliative partial gastrectomy, anterior gastrojejunostomy, Devine's exclusion gastrectomy, luminal stenting in proximal inoperable growths, chemotherapy are used in inoperable cases.

In early carcinoma proper lymph nodal clearance is important.

#### **Lymph node stations in gastric carcinoma—(Japan)—18 stations are there**

1. Right cardiac
2. Left cardiac
3. Nodes along the lesser curvature
4. Nodes along the greater curvature
  - a. Along short gastric vessels—4sa
  - b. Along left gastroepiploic vessels—4sb
  - c. Along right gastroepiploic vessels—4sd
5. Suprapyloric nodes
6. Subpyloric nodes
7. Along left gastric artery
8. Along common hepatic artery
9. Along celiac axis
10. At splenic hilum
11. Along splenic artery
12. At hepatoduodenal ligament
13. Retroduodenal lymph nodes
14. At root of mesentery
15. Around middle colic artery
16. Para-aortic nodes
17. Around lower oesophagus
18. Supradiaphragmatic

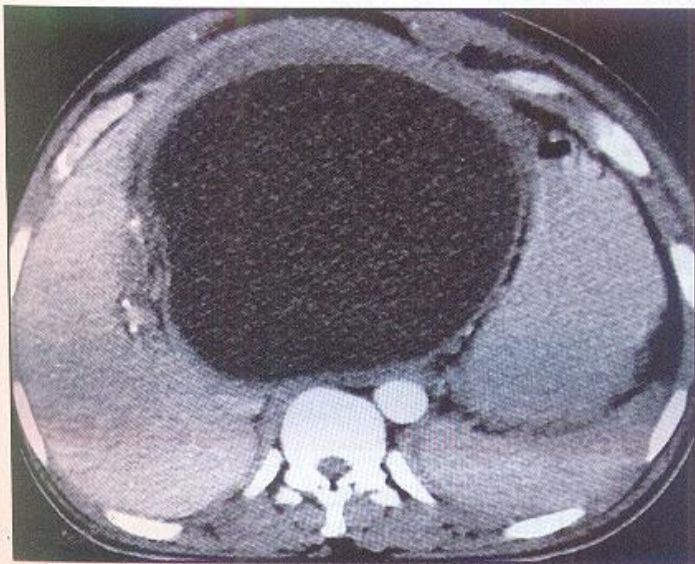
to duodenum, jejunum, splenic hilum and colon. It can be of communicating and noncommunicating type. It often mimics aortic aneurysm, retroperitoneal cystic tumours, cystadenocarcinoma of pancreas.

#### *Cystadenocarcinoma of the Pancreas*

Mass is smooth, firm, does not move with respiration, not mobile, resonant on percussion. Patient also has back pain (**Figs 21.46A to C**).



<p><b>Investigations for pseudocyst of pancreas—</b>          Ultrasound—commonly done procedure          CT scan ideal and of choice (<b>Fig. 21.45</b>)          LFT, serum amylase, prothrombin time          ERCP to find out communications          Barium meal—not done now—shows widened vertebro gastric angle</p>	<p><b>Indications for intervention—</b>          Size more than 6 cm          Formed thick walled pseudocyst          Infected pseudocyst</p>
<p><b>Interventions—</b>          Roux-en-Y cystojejunostomy is ideal          Cystogastrostomy—Jurasz procedure—commonly done          Cystoduodenostomy          Cystogastrostomy with external drainage if infected—Smith operation          Endoscopic stenting          Laparoscopic cystogastrostomy—popular—safer          Guided aspiration helps but high recurrence rate of 70%</p>	<p><b>Complications</b>          Rupture—3%          Infection—20%          Bleeding—torrential 7%          Cholangitis</p>
<p>Acute fluid collection—just fluid collection          Acute pseudocyst with thin wall          Chronic pseudocyst—thick walled          Pseudopseudocyst—inflammatory mass of bowel, omentum, etc. after acute pancreatitis mimics pseudocyst</p>	



**Fig. 21.45:** Pseudocyst of pancreas—  
CT scan picture

#### Colonic Mass

It is commonly due to carcinoma of transverse colon but can be due to intussusception, hyperplastic tuberculosis, and diverticulitis. It is mobile, horizontally placed, nodular, hard mass which does not move with respiration; Caecum will be dilated and palpable; It is resonant or impaired resonant on percussion; Patient will be having bowel symptoms, loss of appetite and decreased weight as seen in tuberculosis, carcinoma. Ileocolic intussusception is the commonest type

#### Para-aortic Lymph Node Mass

Presents as mass in the epigastric region which is deeply placed, not mobile, not moving with respiration. It is vertically placed, *level of the umbilicus* and resonant on percussion. Causes for enlargement are: *Secondaries, Lymphomas or Tuberculosis.*

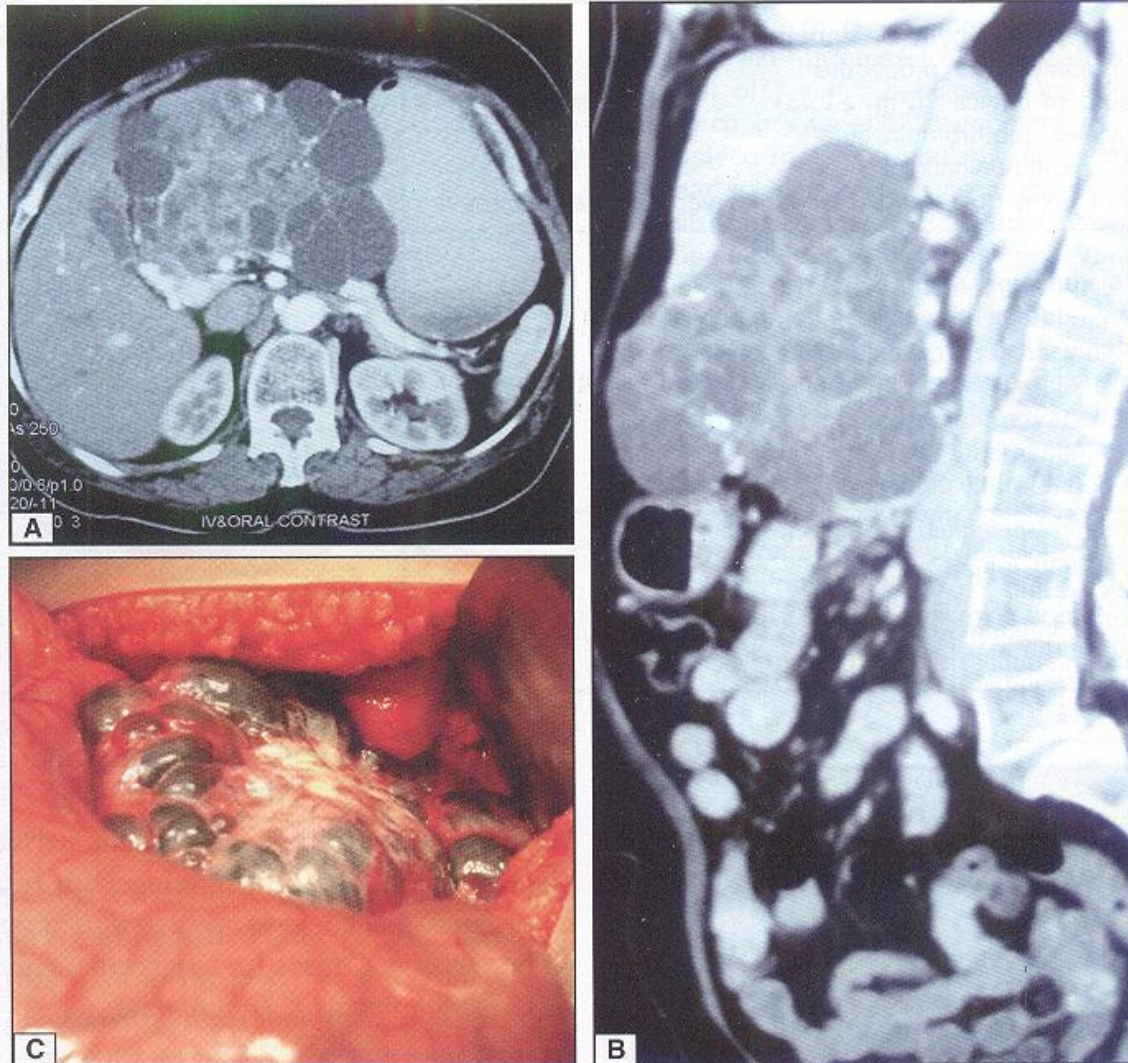
#### Aortic Aneurysm

It is smooth, soft, pulsatile (expansile pulsation which is confirmed by placing the patient in knee-elbow position or in lateral position. Pulsation persists even in knee-elbow position; whereas transmitted pulsation disappears or decreases in intensity). It is vertically placed above the level of the umbilicus, not mobile, not moving with respiration and resonant on percussion.

#### Omental Mass

Omentum gets thickened with nodules and irregular surface. Omental mass moves with respiration, has nodular surface, firm in consistency, dull on percussion. Often lower margin is rolled up which is a feature of tuberculosis (Rolling is due to fibrosis). Omentum may get involved in malignancy as secondaries or in inflammatory conditions as part of inflammatory mass. Omentum is the usual component of any composite mass.





**Figs 21.46A to C:** Cystadenocarcinoma of pancreas from body and tail of pancreas—large extensive tumour.

#### **Intussusception**

Ileocolic type is the commonest  
 Red currant jelly  
 Mass appears and disappears  
 Smooth, firm sausage shaped mass around the umbilicus with concavity towards umbilicus  
 Empty right iliac fossa  
 Mass contracts under the palpating fingers

#### **Colonic tuberculosis**

Usually hyperplastic type  
 Loss of appetite and weight  
 Irregular mass often adherent and nonmobile  
 Impaired resonant  
 Ascites, doughy abdomen may be present  
 Difficult to differentiate clinically from carcinoma  
 Colonoscopy confirms the condition

#### **Carcinoma transverse colon**

Anaemia, loss of appetite and weight  
 Alternate constipation and diarrhoea  
 Palpable mass in the epigastrium or umbilical region (upper part)—nodular, hard, impaired resonant, does not move with respiration, mobile in all directions  
 Features of obstruction/closed loop obstruction when ileocaecal valve is incompetent  
 Ascites, liver secondaries later  
 Colonoscopy proves the diagnosis

#### **Inflammatory conditions like diverticulitis**

Pain, bowel symptoms  
 Mass which is tender, firm, nonmobile  
 Often it is a composite mass lesion comprised of small bowel, omentum  
 May be adherent to abdominal wall  
 Pericolic abscess, internal fistula may be the presentation



## MASS IN THE LEFT HYPOCHONDRIMUM

**Parietal swellings**

Sebaceous cyst, lipoma, neurofibroma, cold abscess (from ribs or spine, presents as soft, fluctuant nontender well localised swelling), liver abscess or subphrenic abscess rupturing into the abdominal wall presenting as parietal wall abscess

**Intra-abdominal swellings**

Splenomegaly—Malaria, Kala azar, hereditary splenomegaly, ITP, haemolytic anaemias, lymphoma, porphyria, splenic cysts (rare)  
 Splenic flexure of colon—carcinoma  
 Tail of the pancreas—pseudocyst, tumour  
 Left subphrenic space  
 Left kidney—hydronephrosis, RCC, polycystic disease  
 Left adrenal gland tumour

*Enlarged Spleen*

Spleen has to enlarge three times to be palpated clinically. It enlarges towards the right iliac fossa from left costal margin. It moves with respiration, mobile, obliquely placed, smooth, soft or firm, with a notch on the superior margin near anterior end. Fingers can not be insinuated over the upper border. It enlarges downwards, inwards and forwards. '*Hook sign*' is positive, i.e one cannot insinuate the fingers under the left costal margin. It is dull on percussion.

**Left sided colonic mass (splenic flexure):** It is mobile, nodular, resonant, and does not move with respiration. It is commonly due to carcinoma colon. Bowel symptoms like diarrhoea, tenesmus, constipation, intestinal obstruction, may be a feature.

**Left renal mass from upper pole of any cause:** It has got features of renal mass.

**Left sided adrenal mass:** It does not move with respiration. It is deeply placed mass, not mobile. Often it crosses the midline. It is resonant on percussion. It mimics kidney mass.

*Mass Arising from the Tail of the Pancreas*

It could be pseudocyst or cystadenoma/cystadenocarcinoma of pancreas. It is deeply placed mass, does not move with respiration, nonmobile, resonant.

*Hereditary Spherocytosis*

It is an autosomal dominant disease effecting males and females equally. Here there is an increase in red cell permeability to sodium. So sodium leaks into the red cells by which it becomes spherical and more fragile. This leads to greater loss of membrane phospholipid resulting in weakening of the membrane with increase in energy and oxygen requirement. So these RBC's are destroyed in spleen causing haemolytic anaemia, haemolytic jaundice, unconjugated hyperbilirubinaemia, pigmented gallstones, cholangitis.

**Clinical features:** Pallor, jaundice, recurrent fever, pain abdomen, splenomegaly, hepatomegaly, chronic leg ulcer. Gallstones are seen in 60% cases. Acute haemolytic crisis can occur.

**Investigations:** *Fragility test:* Here increased fragility of the erythrocytes is the typical feature. Haemolysis occurs in 0.6% or in even stronger solutions. Reticulocyte count is increased significantly. Faecal urobilinogen is increased. Labelled radioactive chromium shows faster red cell destruction. US abdomen is done to look for gallstones, spleen, liver, CBD. Peripheral smear, haematocrit and LFT. Direct Coomb's test is negative.

*Idiopathic Thrombocytopenic Purpura (ITP)*

It is development of *antiplatelet antibodies*, which damage patient's own platelets.

**Splenic mass**

Enlarges towards umbilicus and right iliac fossa—  
 inwards, forwards, outwards  
 Moves with respiration—well  
 Splenic notch on the superior border anterior end  
 Smooth, firm, dull on percussion  
 Felt on superficial palpation  
 Renal angle is normal and resonant  
 Not bimanually palpable nor ballotable  
 Cannot insinuate/hook under left costal margin

**Renal mass**

Enlarges downwards towards left iliac fossa  
 Moves with respiration—slightly  
 No notch is felt  
 Colonic band of resonance in front  
 Felt on deep palpation  
 Renal angle is full; dull on percussion; may be tender  
 Bimanually palpable and ballotable  
 Can insinuate fingers under left costal margin