

PATHOLOGY GROSS
Blood and CVS

1. Atheroma aorta

Mounted specimen of cut open aorta with multiple ostia showing yellow, flat elongated fatty streaks and multiple yellowish to white raised athromatous plaques.

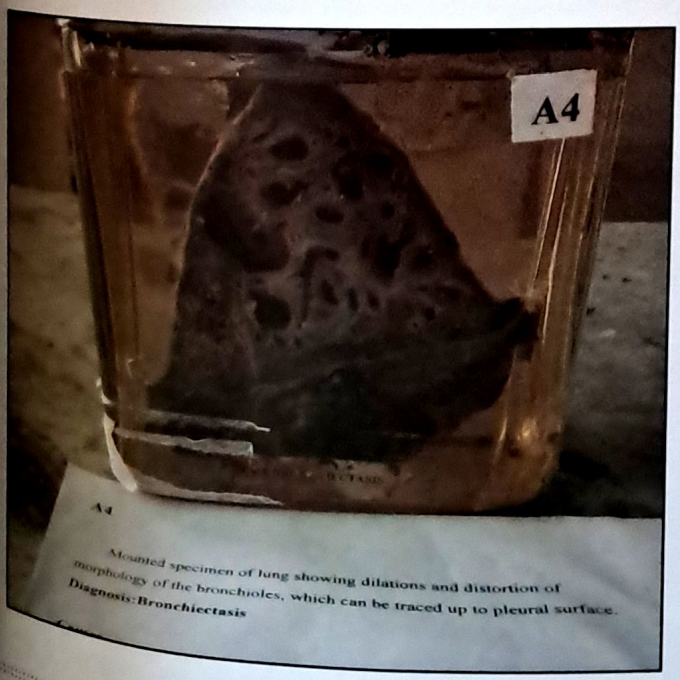
- Fully developed atherosclerotic lesion called atheromatous fibro fatty plaque or atheroma seen.
- CS shows a firm white fibrous cap & central care of yellowish white soft porridge like material.



2. Myocardial infraction (with aneurysms)

whole mounted bisected half of heart with left ventricle showing grey white areas with focal thinning of papillary muscles and dilation of ventricle wall.

- MI scar with left ventricular aneurysm. Respiratory system



Respiratory System

1) Bronchiectasis

Mounted specimen of lung showing dilations and distortion of morphology of bronchioles, which can be traced up to pleural surface.

- Permanent abnormal dilatations of distal bronchi and bronchioles
- Dilated always can be cylindrical, funiform, saccular, varicose in shape "
- Bronchial wall shows inflammatory exudate associated with destruction of smooth muscle & elastic tissues, along with areas of ulceration & fibrosis
- Affecting Lower lobes of lung bilaterally.

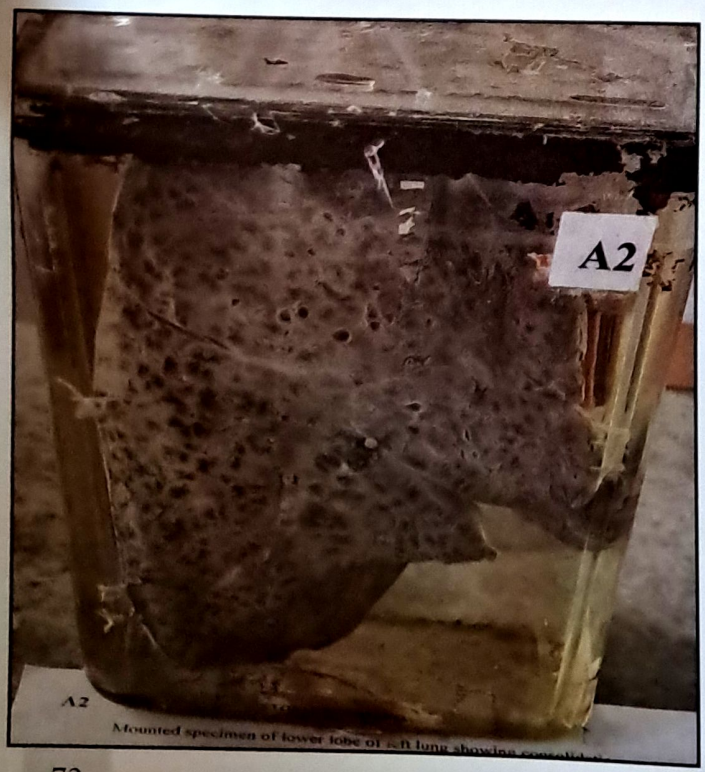
- Causes
  - Congenital or hereditary conditions - cystic fibrosis, intralobar sequestration of lung, immunodeficiency stage primary. ciliary dyskinesia, kartagener's syndrome.
  - Severe necrotizing pneumonia.
  - Bronchial obstruction
  - Immune disorders
  - Idiopathic
  - Complication - Cor Pulmonale amyloidosis, metastatic abscess



2) Bronchopneumonia

Mounted pneumonectomy specimen of lung shows multiple grey white foci of consolidation around bronchioles. Some bronchi appears dilated.

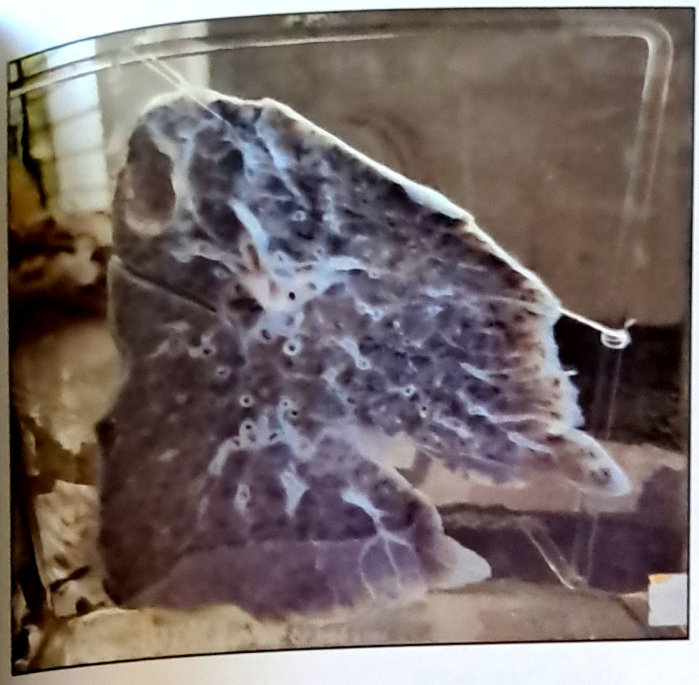
- Pathological state- stage of congestion, red hepatisation (early consolidation), grey hepatisation (late consolidation),resolution
- Lower lobes are mostly affected.
- Causes:- Staphylococcus, streptococci, pneumococci, Klebsiella pneumonia, H. Influenza, gram negative bacilli like pseudomonas and coliform bacteria.
- Complications-Organisations, Pleural effusion, lung abscess,Metastatic infection -bacteremic dissemination.



3) Lobar pneumonia

Mounted specimen of liner lobe of lung showing consolidation

- Etiologies-Pneumococcal pneumonia, Staphylococcal pneumonia, Streptococcal pneumonia, pneumonia by gram negative acrobic bacteria.
- Complications-Organisation, Pleural effusion, Lung abscess ,Empyema, Metastatic infection.



4) Cavity lung

Mounted specimen of bisected half of lung showing a cavitatory lesion towards the apex. Inner wall of cavity is shaggy.

- Causes of Cavity lung
  - 1) Infectious lung abscess. Pneumatocele - Staphylococcus, Tuberculosis, Fungal (as-pergillus)
  - 2) Neoplasm- Primary metastasis.
  - 3) Vascular-Lung infection.
  - 4) Congenital- Bronchogenic cyst.

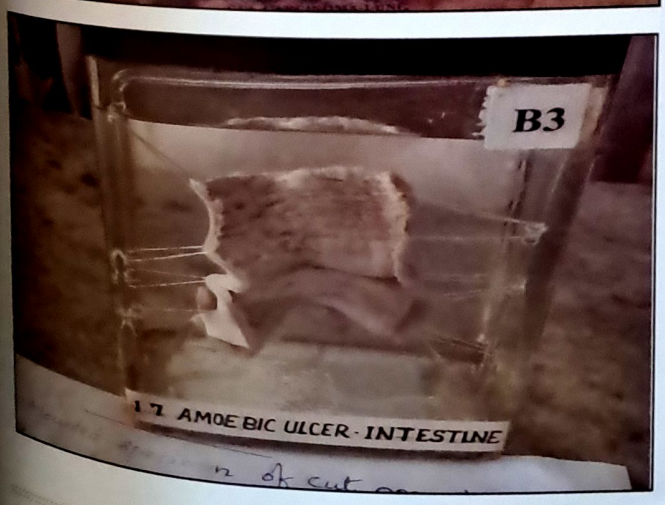
5)Carcinoma of lung

Mounted lung specimen showing an ill defined. infiltrating grey white lesion in lung parenchyma

- Common site- hilar right lung
- yellowish white with foci of necrosis & hemorrhage







GIT

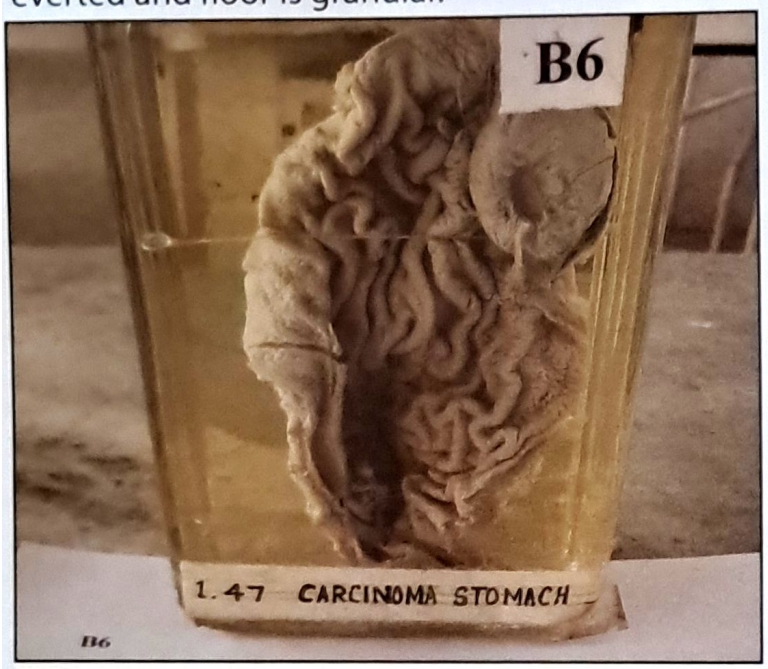
1)Amoebic ulcer- intestine

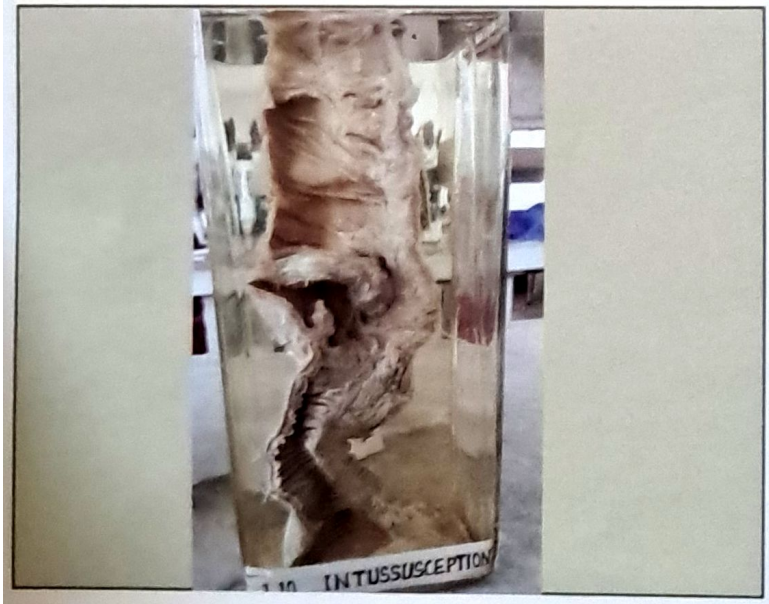
Mounted specimen of cut opened Large Intestine with multiple tiny ulcers with intervening normal mucosa

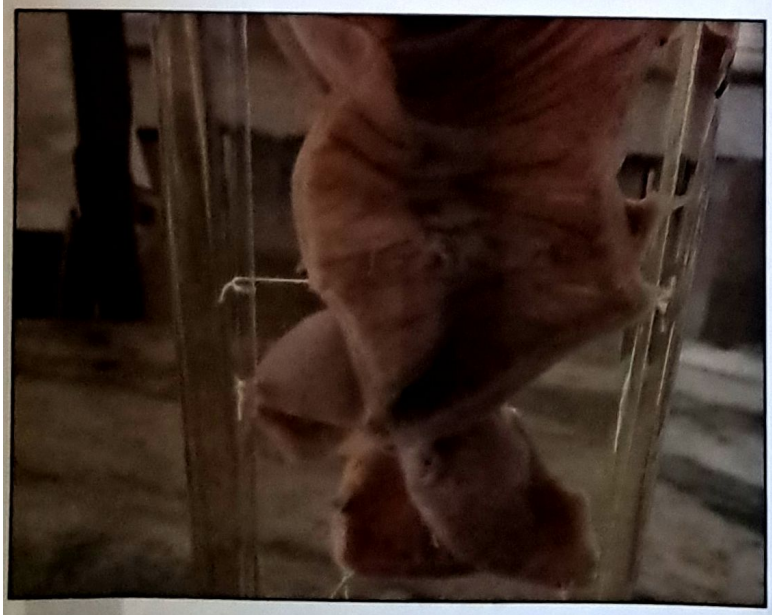
- Most common site is caecum
- Pinpoint ulcerations present (typical flask shaped ulcers with broad base and narrow neck)

2)Carcinoma of stomach

Mounted gastrectomy specimen showing an elevated growth with central ulceration on mucosal aspect .Cut surface of the growth is granular and grey white Edge of the ulcer is everted and floor is granular.







- Abnormal growth present in rugae (ulcer proliferation growth)
- Risk factors:
  - H pylori infection
  - Dietary factors-Tobacco smoking Alcohol consumption
  - Geographical-racial, genetic factors
  - Premalignant changes in mucosa(Due to hypo/achlorhydria, adenomatous polyp of stomach, Chronic gastric ulcer, Stump carcinoma)
- Subtypes:

a) Early gastric carcinoma- polypoid, superficial elevated, superficial flat, superficial depressed, ulcerated type

b) Advanced gastric carcinoma-ulcerated

c) Fungating

d) Scirrhous

e) Colloid

f) Ulcer cancer

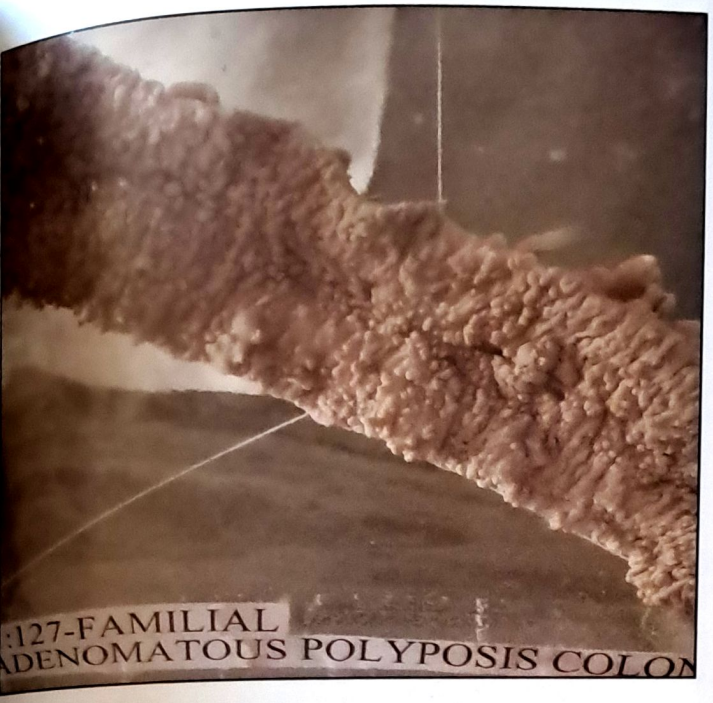
3) Intussusception

- Telescoping of a segment of intestine into the segment below due to peristalsis.
- Telescoping segment : intussusceptum
- Telescoping into : intussuscipiens
- Congested vessels are also present.

4) Tuberculous ulcer- intestine

Mounted specimen of segment of large intestine mucosa of which shows small ulcer, with necrotic material in the base

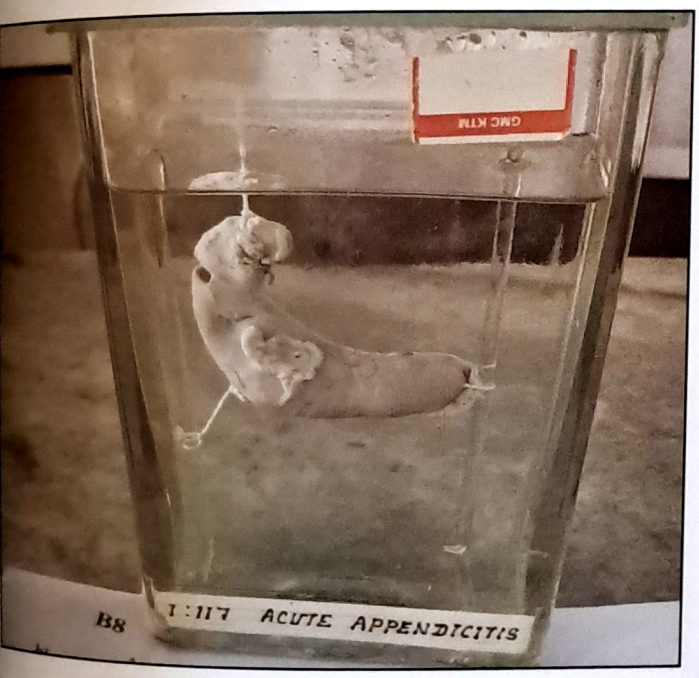
- Transverse ulcerations present
- Abnormal mucus folds present
- Affecting sites-payer's patches, lymphoid follicles.



5) Familial adenomatous polyposis colon

Mounted specimen of cut opened segment large intestine showing numerous grey white polyps varying sizes from (1 x 1 mm)
millimeters to (2x1) centimeters.

- Gene associated with this abnormality-APC gene mutation.
- Risk of carcinoma in this condition-Colorectal adenocarcinoma develops in 100% of untreated patients.
- Presence of more than thousand colorectal polyps.
- Mucosal surface is straddled with multiple polypoid structures (varying size and pedunculated)
- Homogeneous brownish and yellowish.



6) Acute appendicitis

Appendicectomy specimen measuring 7 cm.
Surface shows blue coloured congested vessels.

- Organ is swollen and serosa shows hyperemia (early acute appendicitis)
- Serosa is coated with fibrinopurulent exu dates and engorged vessels on the surface. (acute suppurative appendicitis)
- Soft pliable mucosal surface coated with greenish black gangrenous necrosis.(acute gangrenous appendicitis)
- Complications: peritonitis, appendicular abscess, mucocele, adhesion of appendix.



7) Gangrene intestine

Mounted specimen of segment of small bowel with attached mesentery. Serosal surface of the bowel appears bluish black in colour. A few congested vessels noted in the mesentery, Mucosa of the resected end of intestine also shows bluish black discoloration

Diagnosis: Gangrene small bowel

1. Define gangrene

Gangrene is necrosis of tissue associated with superadded putrefaction, most of the following coagulative necrosis due to ischaemia.

2. Causes of gangrenous small bowel Intestinal obstruction-

- strangulated hernia
- Intussusception
- Ischemic bowel disease
- Peritonitis

3. Complications of gangrene : It lead to perforation of the intestine.

4. Types of gangrene:

1. Dry
2. Wet
3. Gaseous



8) Gastric ulcer

Mounted specimen of cut open stomach showing greyish white disclouration of serosa along lesser curvature with focal bluish tinge. Normal mucosal rugal folds along the lesser curvature at pyloric end is absent. An ulcer is noted at the lesser curvature with a clean edge and floor Diagnosis:Chronic gastric ulcer

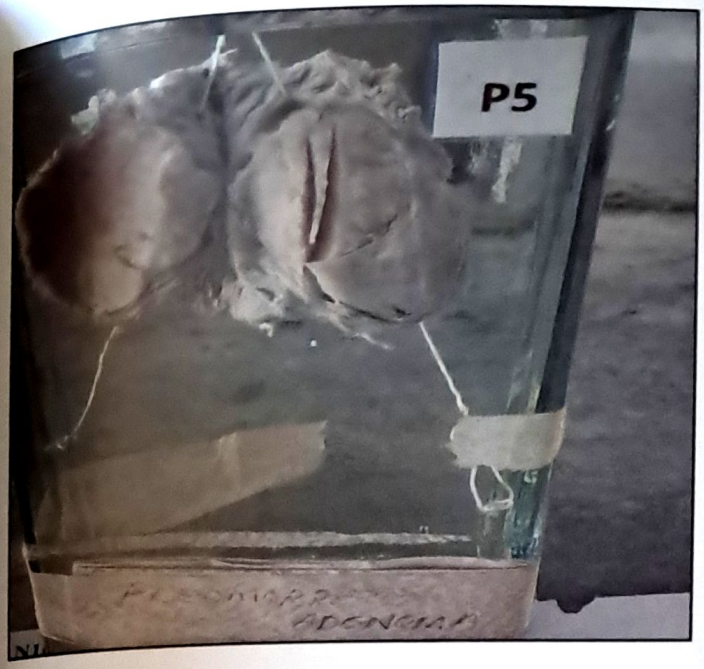
- Mentions two differences between chronic gastric ulcer and malignant ulcer
- Chronic gastric ulcer:
  - They are benign and smaller in size
  - They have punched out edges
- Malignant ulcer:
  - They are malignant with much larger size
  - They have rolled out margin
- Name the risk factors associated with c/c gastric ulcer

  -H-pylori gastritis, NSAIDs-induced mucosal injury Gastritis,spicy foods alcohol, cigarette smoking Psychological stress
- Complications of chronic gastric ulcer: Perforation, haemorrhage, malignant trans formation (<1%)
- Ulcerative lesions on the mucosa.
- Abnormal rugae.
- Mucosal folds converge towards the ulcer.



9) Polyp intestine

- Cut opened segment of small intestine showing a single polypoid structure protruding from the luminal surface.
- Polyp can be variable size, generally multiple, sensible, often pedunculated and smooth surfaced.
- CS is greyish white with faint lobulations.
- More common in large intestine(rectosigmoid colon) than small intestine; broadly classified into neoplastic and non-neoplastic.



10) Pleomorphic adenoma

Mounted specimen of salivary gland showing a well circumscribed grey white growth measuring 3 x 2 x 2 cm.Cut surface of the growth has grey white and chondroid appearance.

Diagnosis: Pleomorphic adenoma

1. Name two malignant neoplasm of salivary gland
   * Adenoid cystic carcinoma
   * Mucoepidermoid carcinoma

- Also known as 'Mixed salivary gland tumour'; commonest tumour of parotid gland
- Solitary, smooth surfaced, sometimes nodular, painless, slow growing, firm mass which is circumscribed, pseudo encapsulated, roun ded tumour with bosselated surface
- Microscopically, mixed appearance with epithelial elements present in a stromal matrix of mucoid. myxoid and chondroitin tissue.



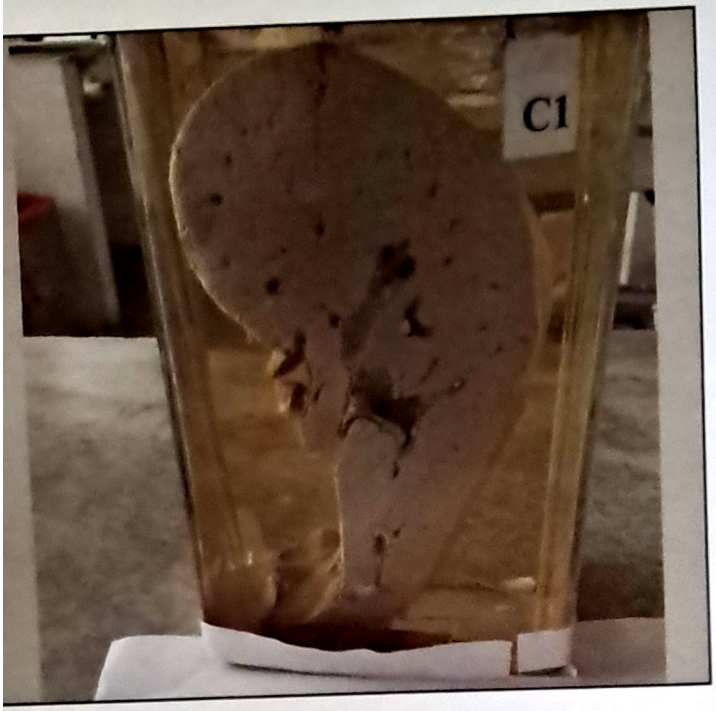
11) Carcinoma colon

Mounted specimen of cut opened large intestine, mucosal surface shows a grey white irregular mass.



12)Chronic calcific pancreatitis

Liver and spleen



1)Fatty liver

Mounted specimen of Slice of liver showing preservation of normal shape.Cut surface shows pale yellowish grey appearance

Diagnosis: Fatty Liver

- Liver enlarged, greasy appearance, cream yellow colour.
- Special stain Sudan 3, Sudan 4, Oil red.
- Abnormal accumulation of triglycerides in the parenchyma cells of liver..

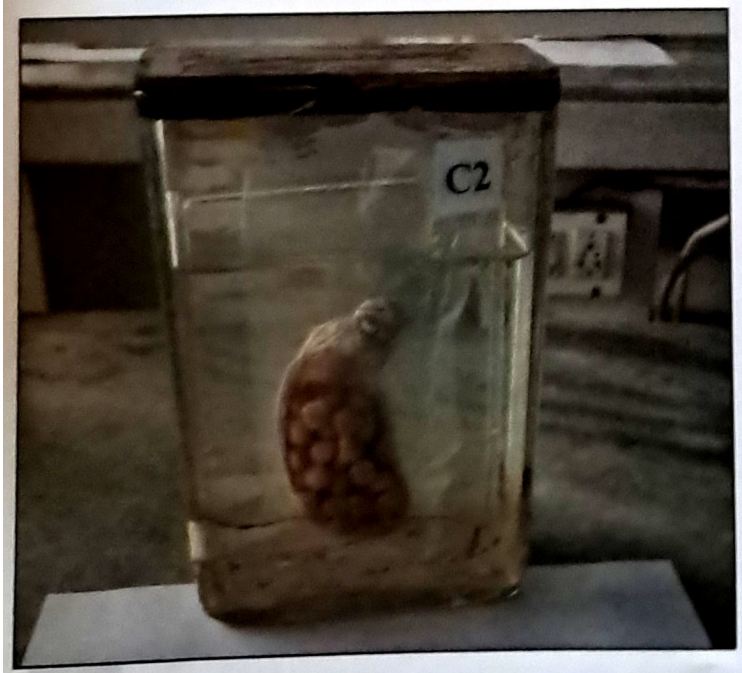
1. List three causes of fatty change

- Alcoholism
- Toxin-lead arsenic, CCl_4
- Diabetes, Obesity
- Protein malnutrition



2) Cirrhosis of liver

- Micronodular pattern (diffused and uniform sized micronodule in yellow colour)
- Greasy appearance with firm consistency.
- Causes: Viral hepatitis, alcoholism, biliary tract diseases.



3)Cholelithiasis/gallstones

Mounted Cholecystectomy specimen showing mild congestion of serosa. Cut surface-cavity is dilated and filled with multiple uniform sized multifaceted yellowish stones Mucosa of gallbladder is ulcerated

Diagnosis: Cholelithiasis

- Composition: cholesterol, bile pigment, calcium carbonate.
- Types: Pure, Mixed (most common), Combined
- Causes: Chronic haemolysis, alcoholic cirrhosis, biliary tract infection.
- Complication: cholecystitis, choledocholithiasis

1. Classification of cholelithiasis

a). Cholesterol stones

- contain>50% crystalline cholesterol monohydrate
- colour Pale Yellow
- round to oval in shape
- Finely granular hard external surface
- Radiolucent

b) Pigment stones

- Composed predominantly of bilirubin calcium salts
- Colour-brown to black







4)Infraction of spleen

Mounted Splenectomy specimen shows a wedge shaped pale area with base at the periphery and apex pointing towards hilum.

- White infarcts
- Two types of infarct - white infarct ex: spleen, kidney, heart(anaemic) -red infarct ex: lungs, intestine (haemorrhagic)

5)CVC Spleen

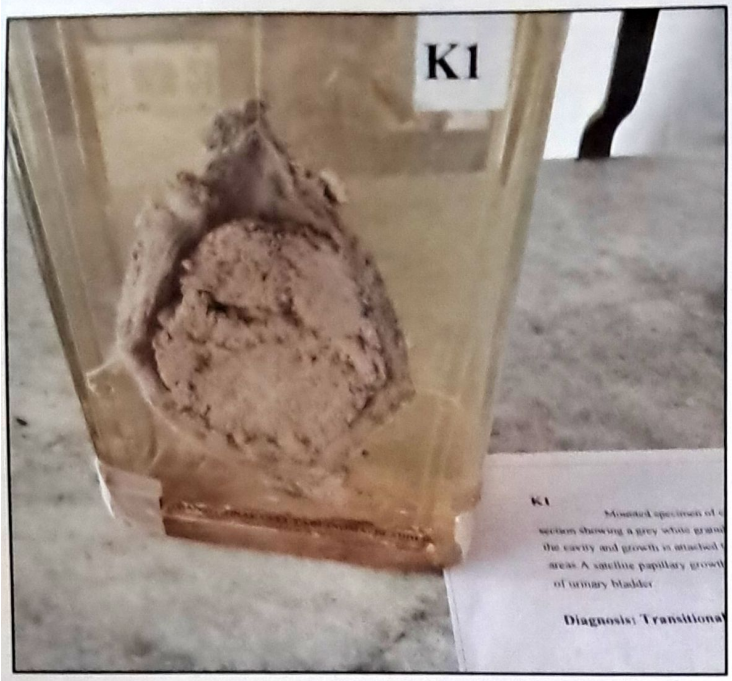
Mounted bisected specimen of spleen showing diffusely enlarged spleen with cut surface - dark brown showing congestion Diagnosis: CVC spleen

- Heavy and enlarged
- Causes - Right heart failure - portal hypertension - antibodies present

KIDNEY

1)Pyelonephritis

- Three types: Acute, chronic, tuberculous
- In acute, enlarged and swollen kidney. Cut surface shows a small yellow white abscess with a hemorrhagic rim.
- In chronic, the kidney is usually small and contracted. C.S is irregularly scarred, overlying dilated blunted deformed calyces & flattened papillae.



2) Transitional cell carcinoma

Mounted specimen of cut opened urinary bladder, with cut section showing a grey white granular growth measuring 7x7 cm with the cavity and growth attached to lateral wall of urinary bladder in areas. A satellite papillary growth measuring 1x1 cm noted on the dome of urinary bladder.
Diagnosis: Transitional cell carcinoma bladder.

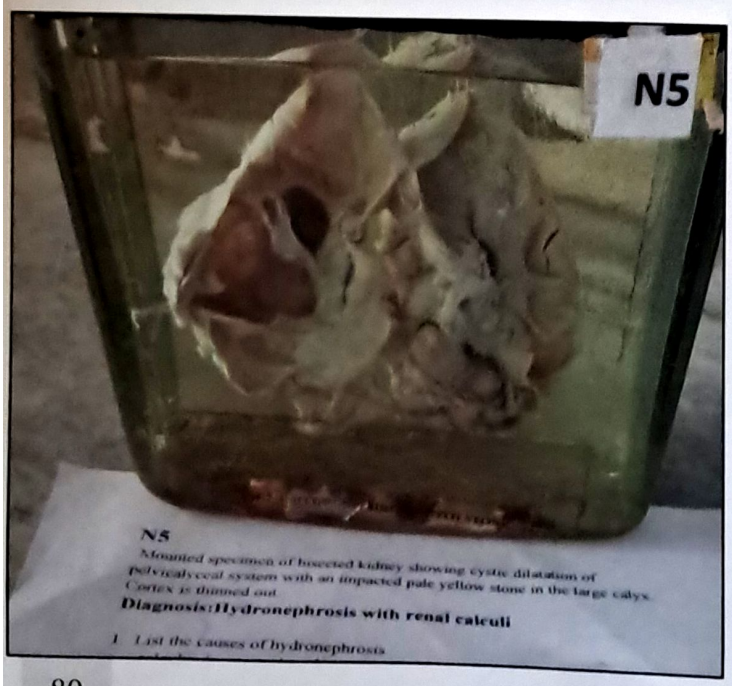
- Tumour of urinary bladder arising from epithelium; most common site being lateral wall, followed by posterior wall; single or multiple
- 2 types-papillary(90%) and flat(10%), which can be again invasive or non-invasive
- Papillary tumors have free floating fern like arrangement with a broad or narrow pedicle

3) Hydronephrosis with stone

Mounted specimen of bisected kidney showing cystic dilatation of pelvicalyceal system with an impacted pale yellow stone in the large calyx Cortex is thinned out.

Diagnosis:Hydronephrosis with renal calculi

- Abnormal dilation of pelvis and calyces
- Kidney may appear like a thin walled cystic structure
- Renal parenchyma shows destruction due to severe pressure atrophy and thinning of cortex



1) List the causes of hydronephrosis

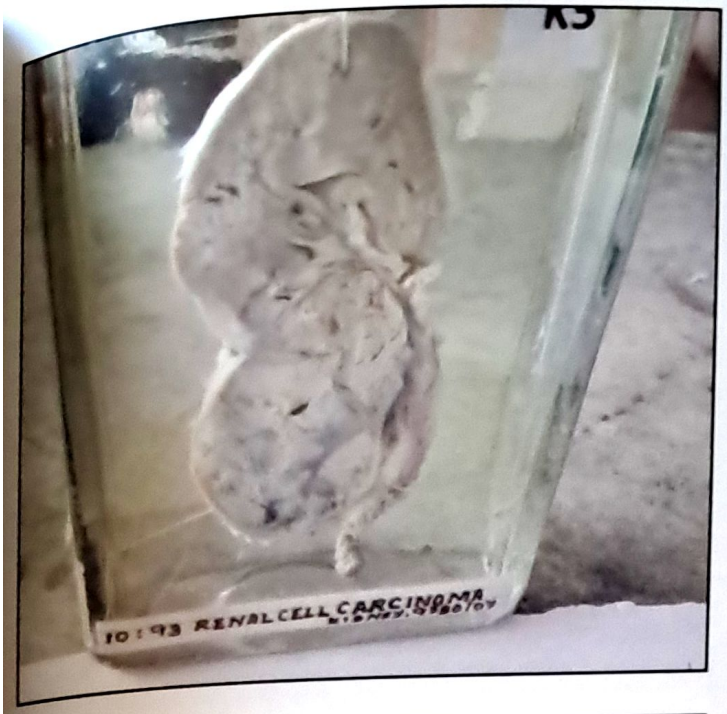
- calculus in ureter/renal pelvis:
- congenital PUJ obstruction Atresia of ureter
- Inflammatory stricture
- Trauma
- Neoplasm of ureter or bladder
- congenital posterior urethral valve -Bladder tumor involving both ureteric orifice
- Bladder neck stenosis

2) List the causes of nephrolithiasis

- Idiopathic hypercalciuria without hypercalcemia
- Hypercalcemia and hypercalciuria
- Gout
- Myeloproliferative disorders
- Uricosuric drugs - Cystinuria (genetic)

3) Complications-

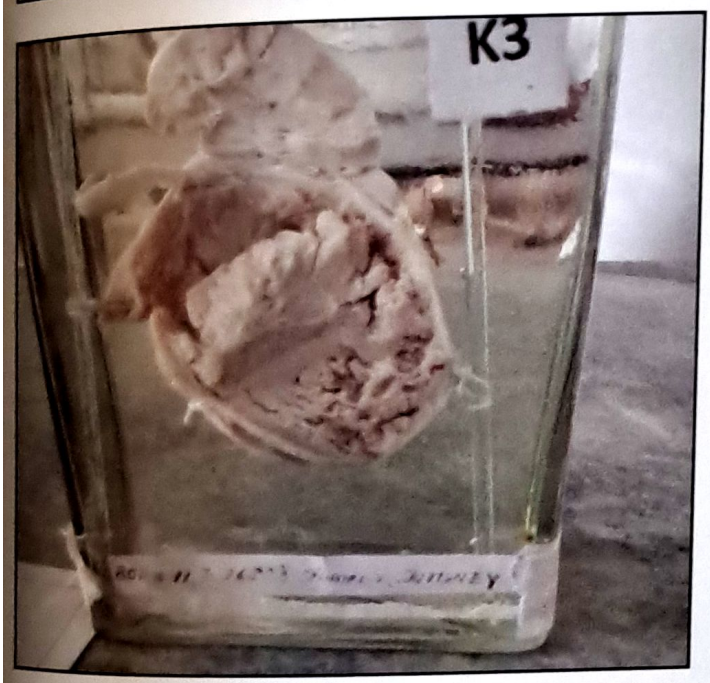
- Abscess formation,
- fistula
- Urethral scarring,
- Urethral perforation



4) Renal cell carcinoma

Bisected half of kidney's lower pole of which shows an infiltrating grey white mass with areas of hemorrhage and necrosis(variegated appearance)

- Solitary mass
- Variegated appearance
- Yellow colour due to prominent lipid in the tumor cell

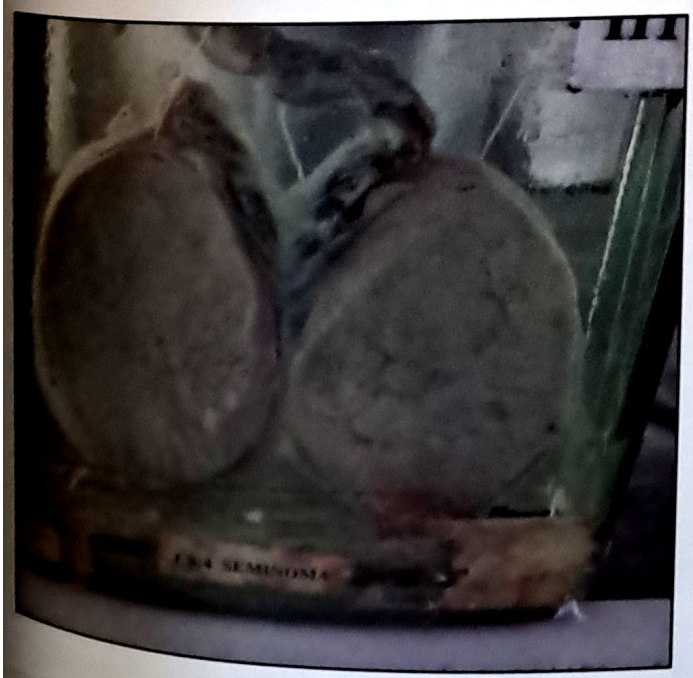


5) Wilms tumor

Mounted specimen of kidney with enlargement of lower pole. Cut section shows a well circumscribed grey white fleshy mass in the lower half of the kidney. Ureter appears free of growth

Diagnosis: Wilms Tumour

- Large, single, round, well circumscribed mass
- Occurring mc in children than adults



MALE REPRODUCTIVE SYSTEM

1)Seminoma of testis

Mounted orchidectomy specimen showing enlarged bisected testis with attached spermatic cord. Cut surface shows well demarcated, homogenous, grey white lobulated mass .No areas of hemorrhage or necrosis seen

- Testis enlarged.
- hemorrhages and necrosis are rare.
- elevated HCG levels.



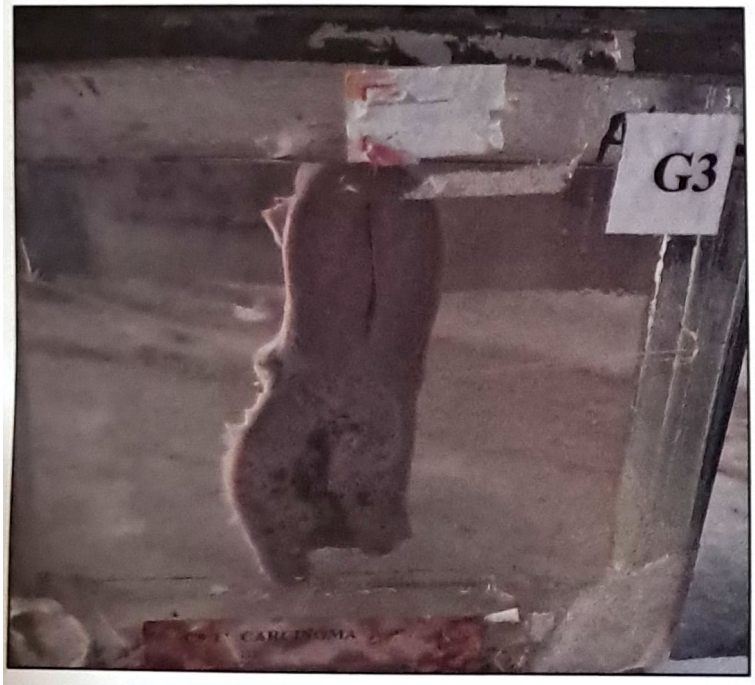
2)Squamous cell carcinoma-penis

Mounted specimen of amputated penis showing a cauliflower like ulceroproliferative grey white growth at the region of glans penis.

- Originates in the inner mucosal lining of glans, coronal sulcus, foreskin.
- Cauliflower like, flat, ulcerated - types
- Related to HPV.

3) Teratoma testis

Mounted orchidectomy specimen with bisected half of enlarged testis with spermatic cord showing a circumscribed grey white lesion with numerous cyst filled with granular material.



FEMALE REPRODUCTIVE SYSTEM

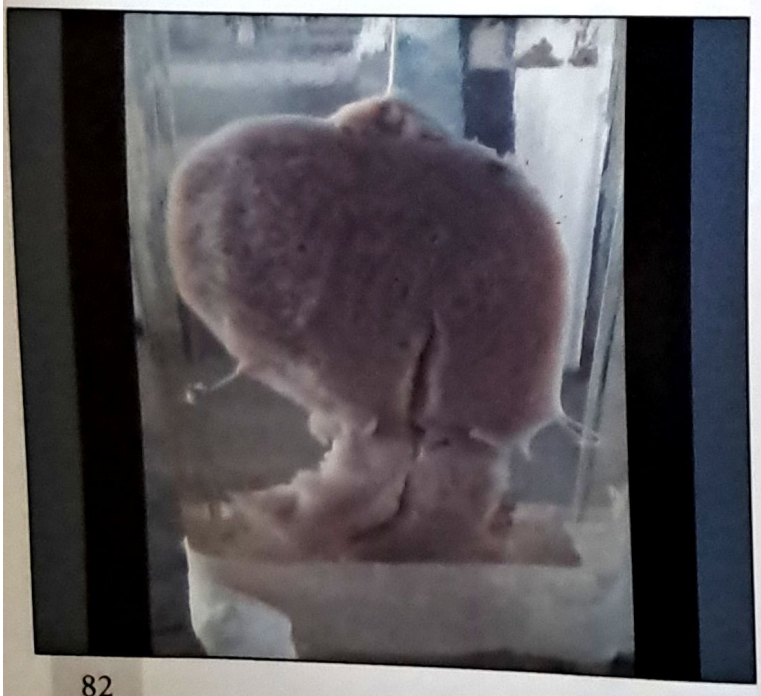
1) Carcinoma Cervix

Bisected half of uterus with cervix showing proliferative growth which is grey-white, infiltrating the wall.

- 3 types:

1. Fungating-Cauliflower like
2. Ulcerating
3. Infiltrating
   - Arises mainly from squamocolumnar junction.
   - Advancing stage - widespread infiltration,
   - Metastasis
   - Histology-

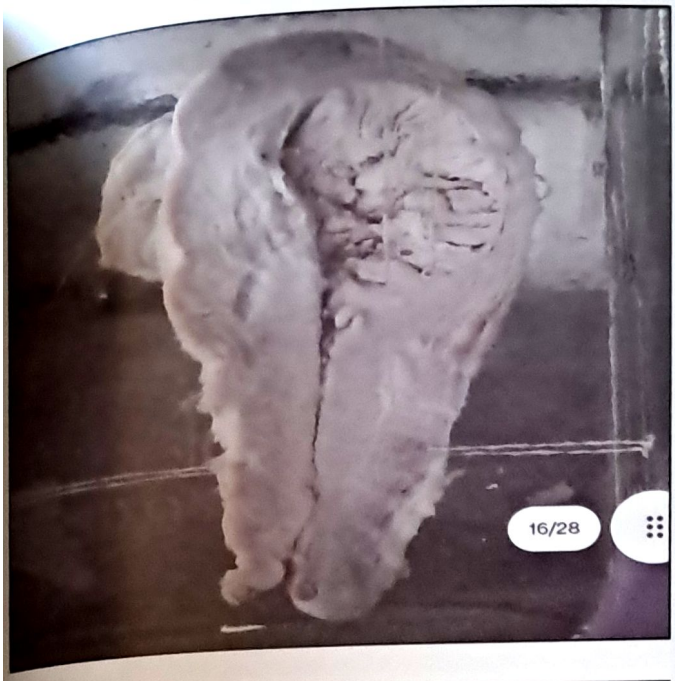
1.Squamous cell carcinoma
2. Adenocarcinoma
3. Neuroendocrine carcinoma
4. Others.



2)Adenomyosis

Mounted specimen of bisected half of uterus with fallopian tube and ovary. Cut section showing asymmetrical thickening, trabeculations and tiny cyst-like spaces in the myometrium.

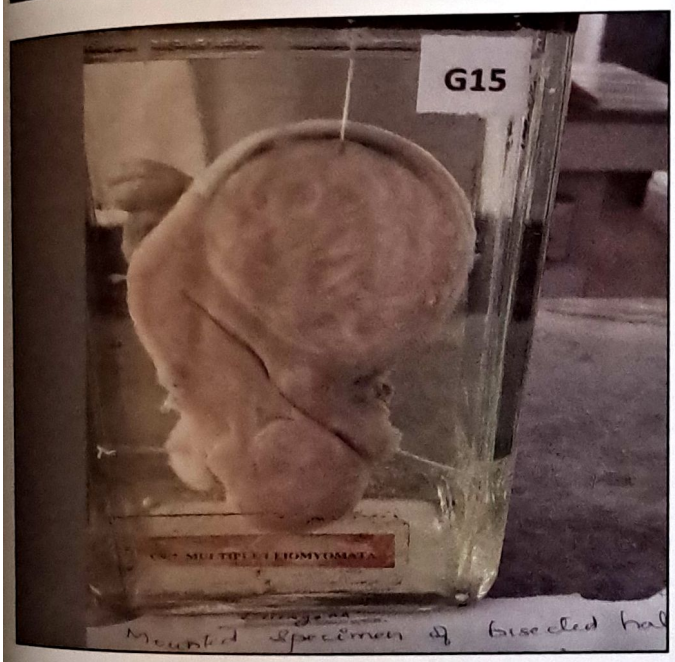
- Cavity intact
- Abnormal distribution of endometrial tissue in myometrium and myometrial hypertrophy.
- Diffuse thickening uterine wall.



3) Carcinoma Endometrium

Mounted specimen of bisected half of uterus with endometrial cavity, showing irregular grey-white granular lesion which is involving the myometrium.

- Enlarged uterus and dilated uterine cavity.
- Irregular, grey white, friable growth arising from endometrial mucosa.
- Extending into myometrium and may be seen as soft friable granular tissue.



4)Leiomyoma

Mounted specimen of bisected half of uterus. Myometrium showing multiple circumscribed lesions.

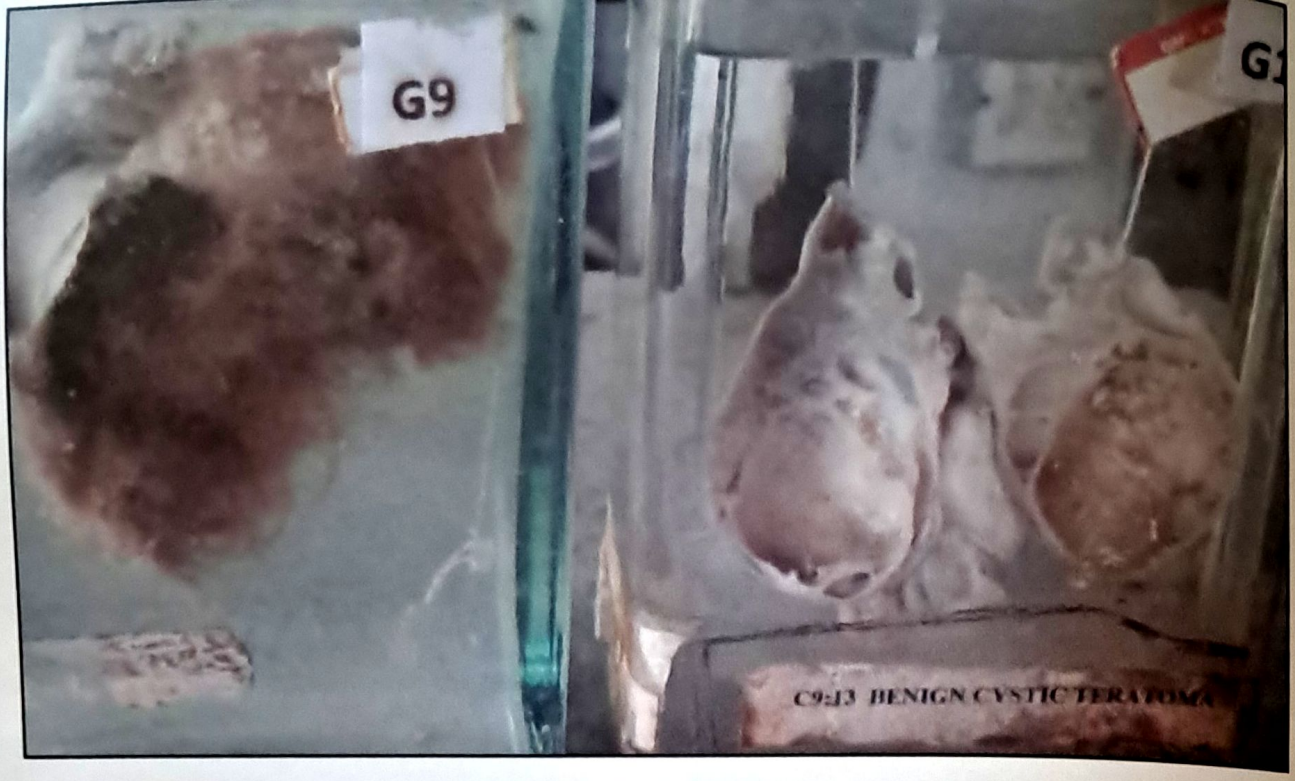
Cut section is solid, white-ish and whorled.

- Cavity wall often intact
- Smooth muscle origin with whorled appearance
- Intramural
- Subserosal
- Submucosl
- Multiple, Circumscribed form nodular grey-white masses



5)Choriocarcinoma

- Gestational (placental origin) and non-gesta tional(ovarian origin)
- Endometrium seen haemorrhagic, soft, fleshy mass often resulting blood clot
- Causes
  1. Hydatidiform
  2. Spontaneous abortion/pregnancy
  3. Ectopic pregnancy



6) Teratoma of Ovary
Benign Cystic Teratoma :

Cut opened cystic mass measuring 1x5x5cm. Wall irregularly thickened. Inner wallshaggy showing a mural nodule measuring 2x2cm with matted hair and puttaceous material filling the cystic cavity.

- 2 forms:

1. Mature (benign)
2. Immature (malignant)

- Tumour cells from all 3 germ layers present (hair,teeth, muscle, cartilage)

- Mature:

- Unilocular cyst lined by skin (Dermoid cyst)

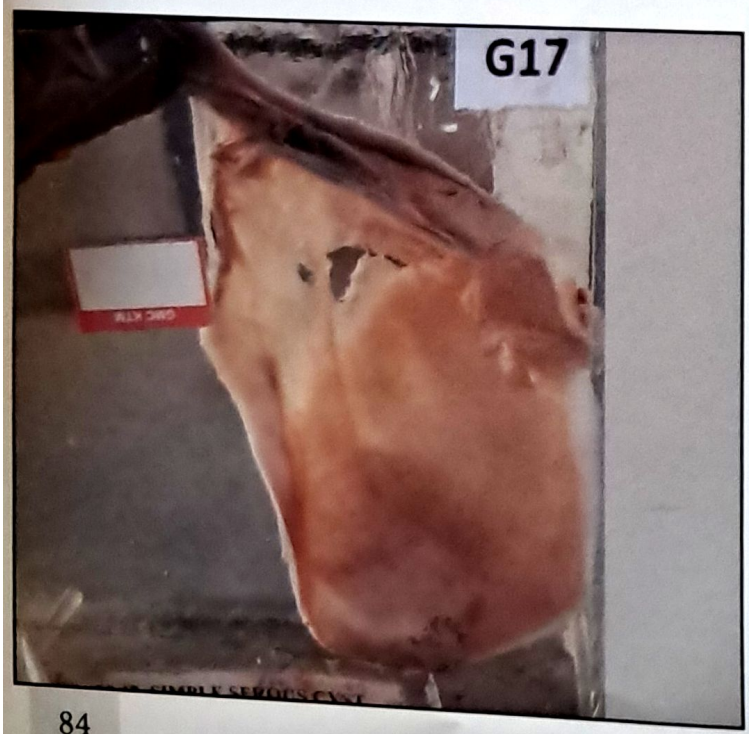
-Filled with paste like sebaceous secretions and desquamated keratin,with masses of hair.

- Rokitansky protuberance seen

- Immature:

- Unilateral solid mass

-cut section-variegated appearance - haemorrhages - Tissue elements - Necrosis.



7) Ovarian Cystadenocarcinoma (Serous)

Mounted specimen of cut opened uniloculated large cyst with inner wall having tiny papillary excrescences.

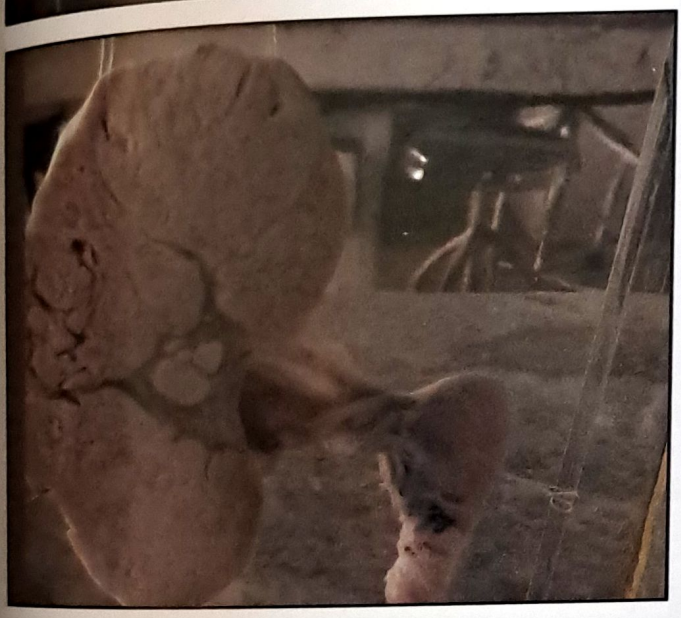
- Large and spherical masses.
- Serous and mucinous forms are there.
- Serous - Small - Unilocular - serous fluid present
- Large-Multilocular - serous fluid present
- Intracystic papillary projections may be present (malignant variety)
- Histological variations:
  1. Cystadenoma
  2. Borderline tumor
  3. Cystadenocarcinoma



8)Ovarian Cystadenoma (Mucinous)

Mounted specimen of cut-opened multi-loculated cystic mass measuring 7x6x4cm with attached fallopian tube. Cut section showing smooth inner wall with gelatinous material.

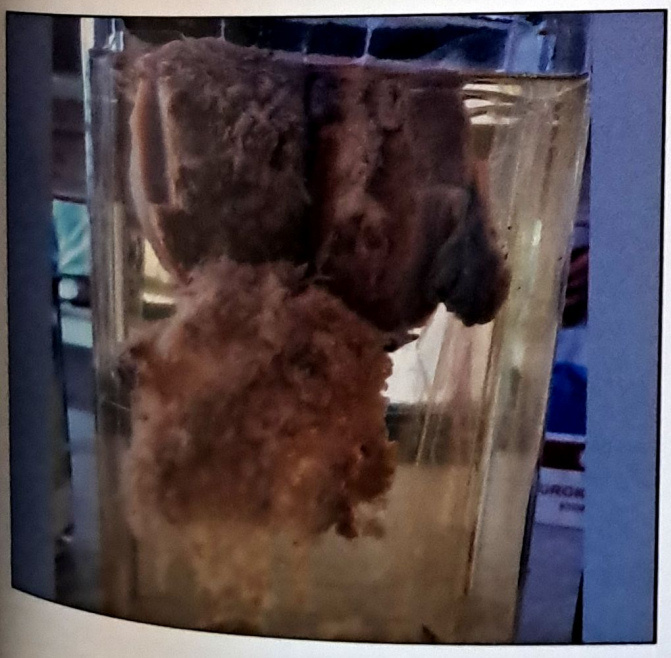
- Mucinous-Larger than serous.
- Smooth surfaced cysts with multi-lobulated and gelatinous fluid.
- Histological variations:
  - Cystadenoma
  - Boderline tumor
  - Cystadenocarcinoma



9)Dysgerminoma

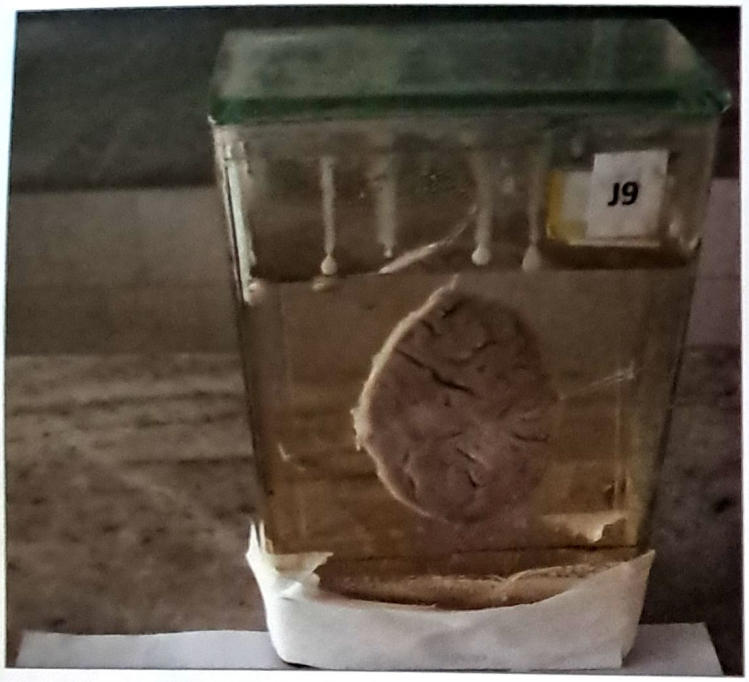
Specimen of bisected half of uterus with attached lobulated mass, cut- section of which is solid lobulated and tan-white.

Normal ovary not seen.



10)Hydatidiform mole

- Abnormal placenta characterised by:
  a) Variable amount of circumferential trophoblastic proliferation.
  b) Enlarged oedematous vesicular chorionic villi
- Two types-invasive, non invasive.
- non invasive:
  complete/classical (46xx 46xy)
  Partial (3n, 4n)
- Complete:
  - uterus enlarged.
  - filled with grape like vesicles.
  - vesicles contain clear watery fluid.
  - uterus smaller than expected.
- Partial:
  placental parts present.
  foetus with multiple malformation is often present.
- Invasive: Invasion into uterine wall causing hemorrhages



BREAST

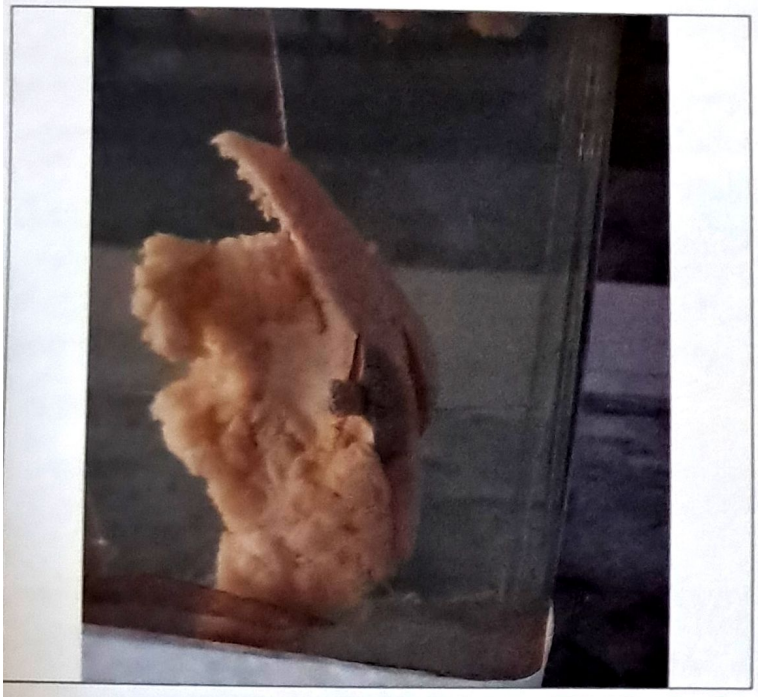
1)Fibroadenoma

Well circumscribed grey white nodular lesion measuring 3x 3 cm. Cut surface of which shows grey white appearance with tiny slit-like spaces

Diagnosis: Fibroadenoma

1. Name two biphasic tumors of breast
   - Fibroadenoma
   - Phylloides tumor

- Solitary, well encapsulated, spherical
- Cut surface - Slit like spaces evident (compressed ducts) - Grey white, firm

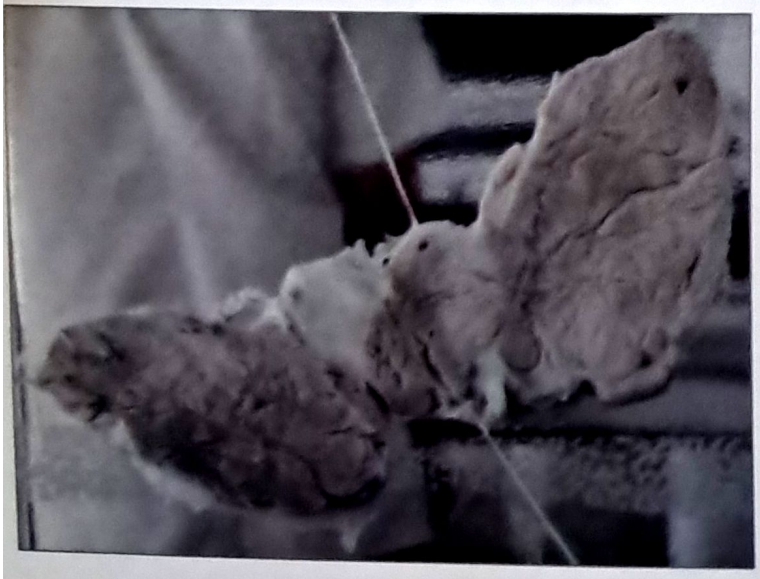


2)Carcinoma Breast

Mastectomy specimen (bisected half) showing ill-defined infiltrating grey-white lesion, seen just beneath the nipple-areola complex.

- Identified by nipple and breast tissue
- Hard cartilage like mass that cuts with a grating sound
- Grey white to yellowish
- Extending regularly into surrounding fat

ENDOCRINE SYSTEM



1)Hashimoto's Thyroiditis

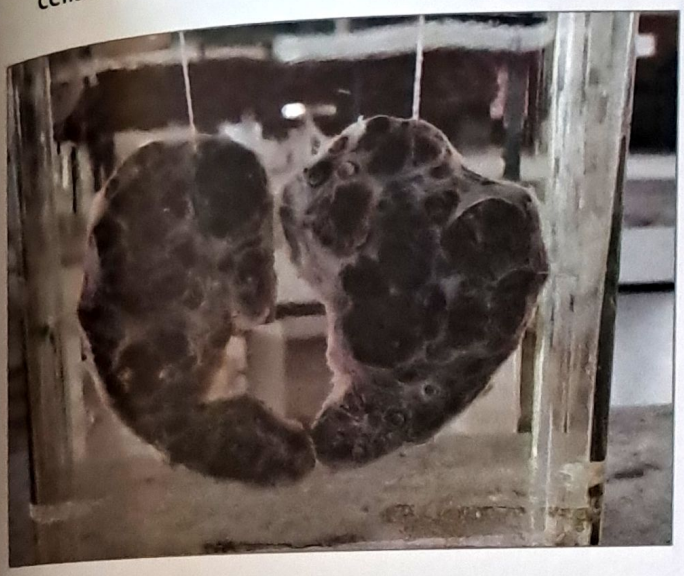
Bissected half of thyroidectomy specimen showing diffuse symmetrically enlargement of lobes with grey-white accentuated of normal lobulated appearance (similar to appearance of salivary gland)

Diagnosis: Hashimotos thyroiditis

- Firm and nodular thyroid gland
- Complications:
- Increased risk of developing autoimmune disease (SLE, Type and diabetes)

- Increased risk of papillary carcinoma thyroid.
- Increased risk of Lymphoma within thyroid (extra-nodal marginal zone B cell lymphoma)
- Histology:

Thyroid parenchyma shows extensive infiltration by mononuclear cells-small lymphocytes, plasma cells with well developed germinal centers. Thyroid follicles show atrophy and lined focally by epithelial cells with abundant eosinophilic, granular cytoplasm called "Hurthle cells"



2)Multinodular Goitre

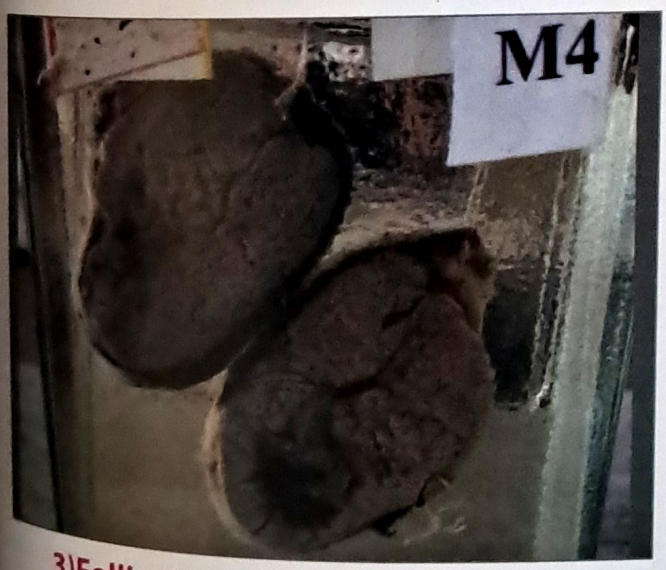
Mounted thyroidectomy specimen (Bissected half showing asymmetrial enlargement of lobes of thyroid. Surface is bosselated. Cut surface-multiple varying sized colloid filled (varying amount of colloid) nodules and degenerative changes (areas of hemorrhage, cystic change and calcification).

- Etiology

1. Iodine deficiency (Epidermic goitre)
2. Goitrogens-dietary substances that interface with thyroid hormone synthesis. Eg: porassicaceae, cassava
3. Hereditary enzymatic defects (Dyshormonogenitic goitre)

- Complications (4)

1. Superior venecava syndrome (compression of large vessels in neck and upper thorax)
2. Airway obstruction
3. Dysphagia
4. Malignancy-Follicular carcinoma thyroid/papillary carcinoma thyroid
5. Cosmetic effects.



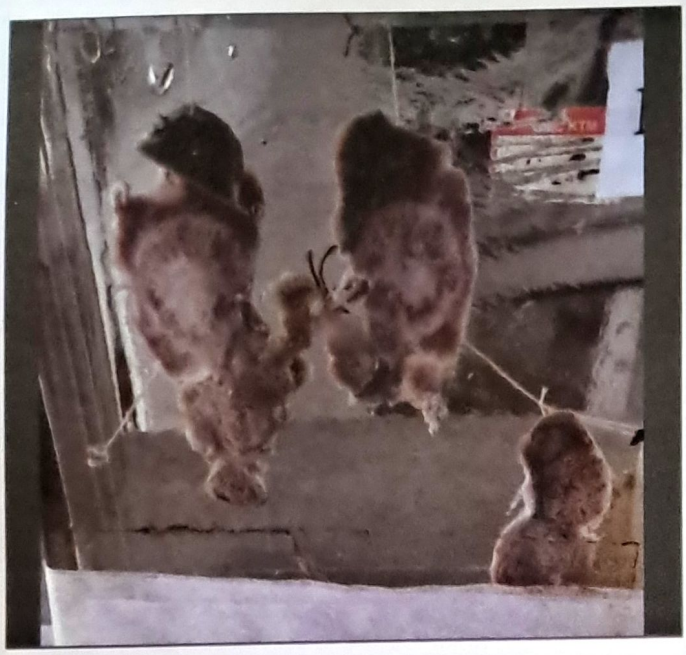
3)Follicular Adenoma of Thyroid

Mounted specimen: Hemi-thyroidectomy specimen showing encapsulated grey-white lesion with area of hemorrhage separated form rest of thyroid by a well defined, intact capsule.

- Single spherical solid encapsulated tumor
- Cut surface is soft and paler
- Well demarcated, surrounded by a thin intact fibrous capsule
- Tumor compressing adjacent thyroid tissue
- Focal areas of hemorrhage and calcification
- Point to differentiate from follicular carcinoma.

1. Adenomas surrounded by well defined intact capsule. Carcinomas shows infiltration through capsule into thyroid parenchyma and beyond thyroid into neck structure.
2. Microscopy-Carcinoma shows capsular and vascular invasion.

   No viable cytologic difference between adenoma and carcinoma



3. Diffuse sclerosing variant
4. Columnar cell variant

- Mode of metastasis.: Via lymphatics.
- Cut surface shows grey-white and bluish, variegated, semitranslucent with occasionally small cystic spaces.
- Microscopically, mixed appearance with epithelial elements present in a stromal matrix of mucoid, myxoid and chondroitin tissue.

4)Papillary Carcinoma of Thyroid

Mounted specimen-thyroidectomy specimen showing ill-circumscribed grey-white granular lesion measuring 2x2cm. Rest of the thyroid shows colloid filled appearance.

- Firm to hard tumor with areas of fibrosis and calcification
- Cut-section showing grossly visible papillae
- Most common thyroid cancer
- Risk factors.
  Exposures to ionising radiation
  Female gender.
- Histological variants:
  1. Follicular variant
  2. Tall cell variant

BONE





1)Osteochondroma

Resected specimen of a bone with a lobulated lesion arising from it, which is continuous with cortex and medulla.

- **Sessile or pedunculated.**
- **Continuous with the cortical bone.**
- **Protrude as mushroom shaped cartilage capped lesions, enclosing a well formed cortical bone and marrow**
- **Chalky white glistening appearance**

2)Osteosarcoma

- **seen in long bone of extremity**
- **Metaphysial end**
- **Grey white mass**
- **Epiphysial cartilage spared**
- **Cut surface - grey white with areas of haemorrhage and necrosis**
- **Radiological findings-Codmans triangle - angle between elevated perioestium and underlying surface of cortex:-sunburst appearance (osteogenesis within)**

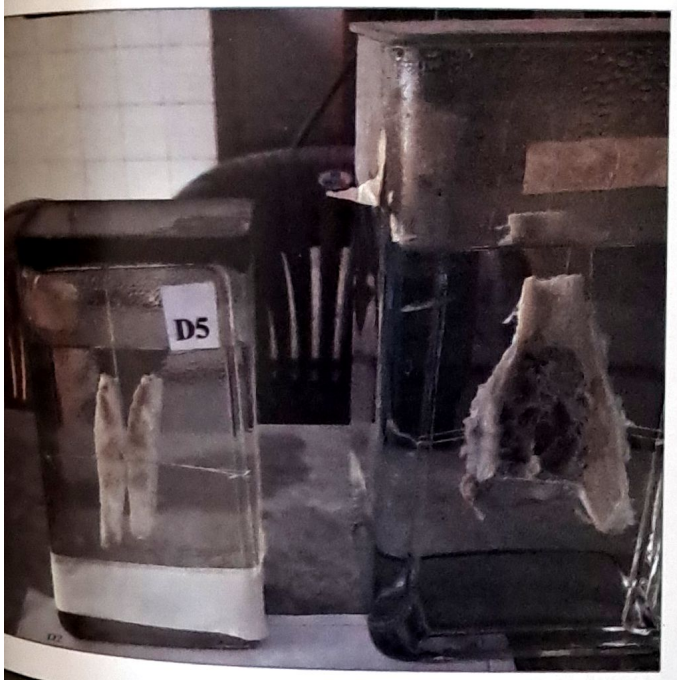


3)Osteoclastoma(Giant Cell Tumour)

Resected specimen of lower end of tibia showing an expansible involving the epiphysis m/g- 5x4cm. Cut section shows lesion involving subarticular area of bone with multiple thin walled cystic spaces. Lesion extends into adjacent metaphysis also. Resected end of bone in 2cm away from the lesion

Diagnosis: Osteoclastoma

- **What is the behavior of the lesion? Benign and locally aggressive**
- **Seen in epiphysial end of long bone (eccentric)**
- **Well circumscribed dark tan lesion covered by thin shell of subperiosteal bone**
- **Cut surface - areas of hemorrhages and necrosis. Honey comb appearance**
- **Radiological findings: soap bubble appearance**



4)Sequestrum

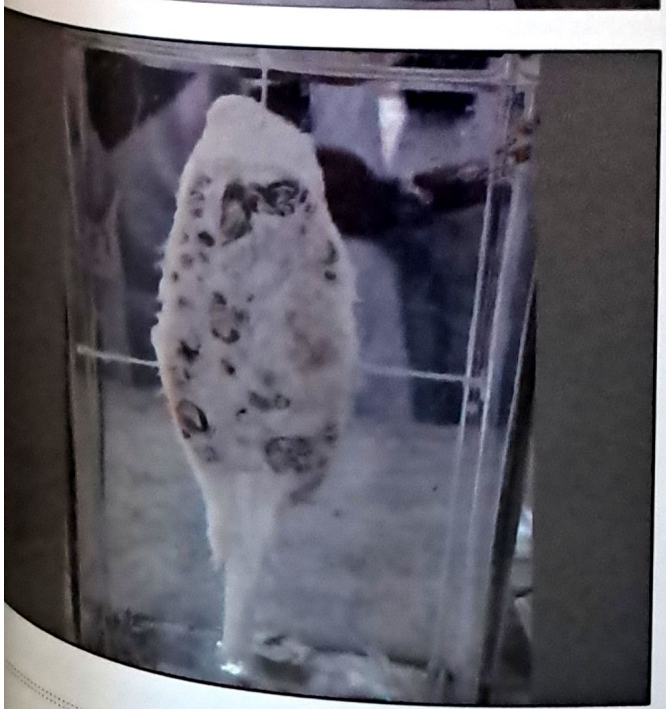
(Two pieces of bone tissue measuring 5x1 cm, each cut surface shows areas of necrosis)

Diagnosis: Sequestrum

- Define sequestrum and involucrum.

  Sequestrum is a segment of necrotic bone/ dead bone. Separated from healthy intact bone.

  Reactive newly deposited bone around the necrotic bone is involucrum.



5)Aneurysmal Bone Cyst

SOFT TISSUE



1)Squamous Cell Carcinoma

Mounted specimen of skin with soft tissue. Surface showing: grey-white, ulceroproliferative cauliflower-like growth arising from skin with areas of necrosis.

FOOT SPECIMEN

Mounted amputation specimen showing a grey-white ulceroproliferative cauliflower-like growth involvong the plantar aspect of foot and 2,3,4 toes

- Arise on any part of skin and mucous membrane lined by squamous epithelium
- Ulcerated growth with elevated/indurated margins



2)Basal Cell Carcinoma

- Rodent ulcer seen with normal skin
- Nodular ulcerative pattern - central ulceration with pearly rolled margines.
- Exclusively on hairy skin.
- Enlarges by burrowing and destroys the tissues
- Fungating form also present.



3)Malignant Melanoma

MOUNTED SPECIMEN: Amputated specimen of big toe showing blackish ulcer, on plantar surface. Cut section of the ulcer shows a blackish growth in 2 x3 cm extending from plantar surface to subcutaneous tissue of dorsal surface with involvement of underlying bone tissue Proximal resected margin is 0.5cm away from growth.

WET SPECIMEN: Wet specimen of skin with underlying soft tissue. Skin shows nodular blackish projection. Cut section-blackish with areas of necrosis.

Seen along with normal skin (toe)

- 5 types -
  - lentigo malignant Melanoma
  - superficial spreading Melanoma.
  - Acral lentiginous Melanoma
  - Nodular melanoma
  - Desmoplastic Melanoma
- Most rapidly spreading malignant tumour of skin arising from melanocytes
- Vertical growth phase
  - Tumorigenic melanoma
  - No RGP compartment -Nodular melanoma(10%)
  - RGP compartment present(90%)
  - Usual vertical growth phase(96%)



Difference between metastatic and dystrophic calcification:

	Dystrophic	Metastatic
Definition	Deposits of calcium in dead and degraded tissue	Deposits of calcium in normal tissue
Calcium metabolism	Normal	Deranged
Serum calcium levels	Normal	Hypercalcemia
Causes	Necrosis Infarcts Thrombi Hematoma Old scar Atheroma	Hyperparathyroidism Bony destructive lesion Hypervitaminosis D

4)Calcinosis Cutis

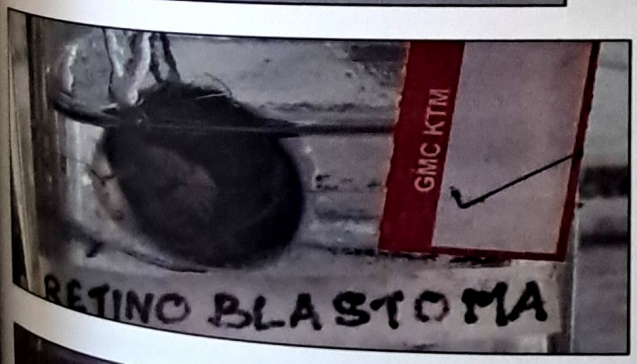
Mounted specimen of skin with subcutaneous tissue showing an irregular grey-white lesion with chalky white deposits.

- Calcium deposition underneath the skin gives a chalky white appearance
- Black Colour on Von Kossa staining
- List 5 causes for hypercalcemia :
  Hyperparathyroidism
  Hyperthyroidism
  Addison's disease
  Hypervitaminosis D
  Renal failure



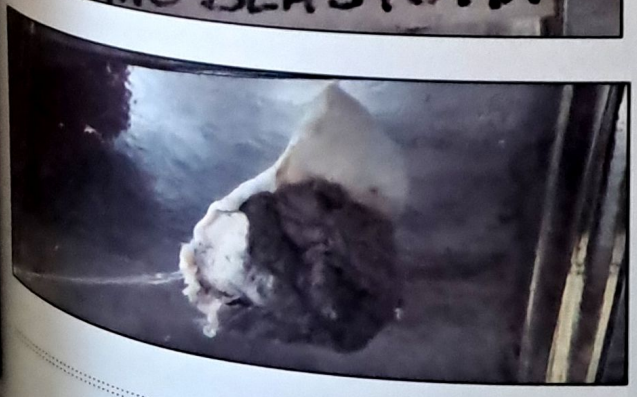
5)Uveal Melanoma

- Cut section of eye with pigmented mass in posterior choroid
- Projects into vitreous cavity covered by retina



6)Retinoblastoma

- White mass within retina
- Partly solid
- Partly necrotic



7)Meningioma

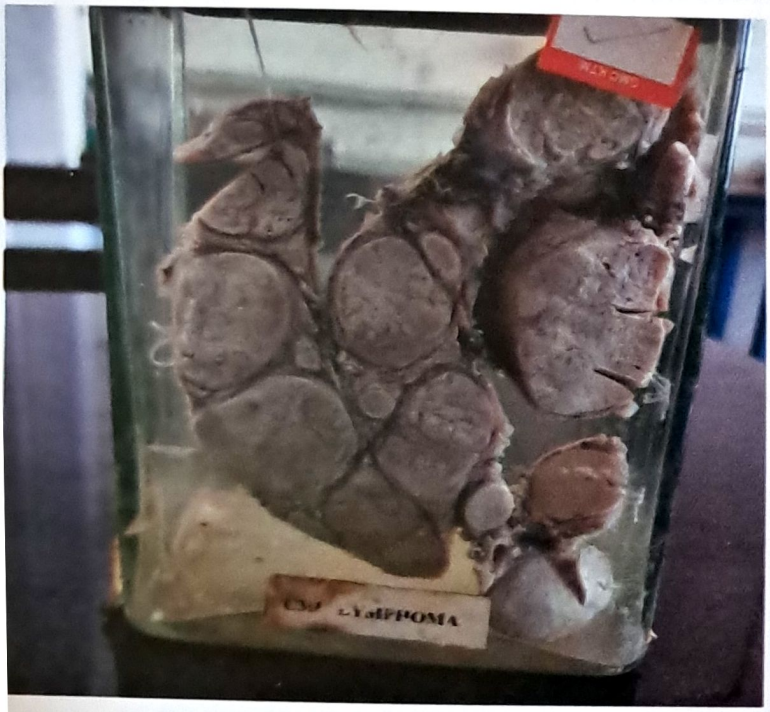


8)Lipoma

Bisected yellowish mass measuring 7 x 7x 5 cm. Cut section of mass shows yellowish grey appearance.

Diagnosis: Lipoma

- Round or oval shape
- Soft and lobulated. Cut surface-Greasy appearance
- Name three benign tissue tumors and name the malignant counterparts.
  - Lipoma-Liposarcoma
  - Neurofibroma-Neurofibrosarcoma
  - Benign fibrosis histocytoma-Malignant fibrosis histocytoma



9)Lymphoma

Mounted specimen of multiple enlarged lymph nodes. Cut section: grey-white.

No areas of necrosis. No matting

Fish flesh like surface



10)Tuberculous Lymphadenitis

Mounted specimen of multiple enlarged matted lymph nodes with areas of cheesy necrosis.

- Greyish appearance, enlarged matted node, capsule thickened
- Areas of caseous necrosis - yellowish soft and granular(resembles dry cheese)