

Skin

Chronic non-specific dermatitis

- The epidermis shows:
Acanthosis, hyperkeratosis, papillomatosis
- The dermis shows:
Fibrosis, End arteritis obliterans

Squamous cell papilloma

- Central core of CT covered by thick layer of stratified squamous epithelium
- This covering epithelium shows Acanthosis, hyperkeratosis, Parakeratosis

Basal cell carcinoma

- Masses of malignant basophilic epithelial cells
- Their nuclei are giving a palisading appearance

Squamous cell carcinoma

- Cell nests formed of malignant epithelial cells
- Central cells of the cell nest show complete cornification (keratin)
- Malignant cells show malignant char.

Melanoma

- Malignant cells show malignant char.
- Dark brown melanin pigment in their cytoplasm & extracellular

Respiratory

Rhinoscleroma

- Mickulicz cells
- Russel bodies
- Overlying epithelium shows hyperplasia and squamous metaplasia

Chronic venous congestion of the lung

- Dilated congested alveolar capillaries
- In alveolar spaces:
Heart failure cells & RBCs

Lobar Pneumonia (Gray hepatization)

- Fibrinous exudates occupying all the alveoli
- These exudates are retracted from the alveolar wall
- Anthracosis

Caseating pulmonary tuberculosis

- Caseating granuloma with:
epithelioid cells & Langhans giant cells
- Caseating necrosis

GIT

Bilharzial colonic polyp

- In the submucosa: central core of CT showing calcified ova
- In the mucosa: hyperplastic glands
- Bilharzial worms in blood vessels

Adeno carcinoma of colon

- The submucosa, muscle layer and serosa are infiltrated by irregular malignant acini
- The mucosa are normal: regular mucosal glands
- The malignant cells show malignant char.

Acute suppurative appendicitis

- In the submucosa: prominent lymphoid follicles & phagocytosis
- In the mucosa: ulceration
- In the lumen: pus
- In the serosa: serofibrinous inflammation

Lymphoreticular (spleen + LN)

Amyloid degeneration of spleen

- Homogenous pink amyloid substance in the basement membrane of sinusoids and central arteriole
- Atrophy of white pulp

Sarcoidosis of spleen

- Multiple non-caseating tubercles with epithelioid cells and Langhans giant cells
- Asteroid bodies & Schaumann bodies

Congestive spleno megal

- Red pulp: dilatation of sinusoids filled with RBCs & haemosiderin
- Gandy-Gamma bodies (Fibrosis + haemosiderin)

Caseating tuberculous lymphadenitis

- Multiple tubercles with central caseation that appears as pale homogenous eosinophilic material.
- Epithelioid cells & Langhans giant cells

Un-labelled

Actinomycosis

- Chronic suppurative granuloma with multiple abscesses.
- Each abscess shows central bacterial colony with basophilic hyphae in the centre

Urinary bladder bilharziasis

- UB is lined with hyperplastic transitional epithelium.
- It dips down forming Brun's nest: cystitis cystica, cystitis glandularis
- Viable ova

Papillary transitional cell carcinoma

- Papillae consist of fibrovascular core covered by malignant transitional epithelium
- Malignant cells show malignant char.
- Hemorrhage & necrosis

Thyroid adenoma

- Closely-packed follicles forming solid mass - Others contain colloid
- No capsular or vascular invasion

Lipoma

- Lobulated capsulated tumour in which fat cells are separated by fibrous tissue septa
- They are giving signet ring appearance

Hemangioma

- Dilated vascular spaces which contain RBCs.
- They are separated by CT stroma in which some intercommunicate together

Osteoclastoma

- Multinucleated giant cells
- Mononuclear cells (malignant component)
- Hemorrhage, necrosis & degeneration

Jars

Benign tumours "epithelial"

Squamous cell papilloma of Skin

- Cauliflower mass "Papillary" Projections
- No invasion of Subcutaneous tissue

Thyroid adenoma

with calcification

- encapsulated
- Chalky white area of dystrophic calcification

Solitary

- encapsulated
- Brownish gelatinous colloid

Malignant tumours

SCC of scalp (malignant ulcer)

- Typical malignant ulcer: raised everted edge, rough necrotic floor
- Invasion of underlying tissue

SCC of scalp (nodular type)

- malignant nodular tumor mass.
- Invasion of underlying tissue & skull eroding the bone

Multiple liver secondaries from carcinoma

- multiple nodules:
 - * Yellowish
 - * uniform in size and shape
 - * Central umbilication
- Yellowish discoloration due to obstructive jaundice.

Metastasis of malignant melanoma of the liver

- multiple nodules
 - * blackish
 - * variable in size and shape
 - * Central umbilication

Secondaries of malignant melanoma of the pancreas

- Two round black nodules: representing metastasis from malignant melanoma

Secondaries of malignant melanoma of the heart

- multiple dark brownish nodules: representing metastasis from malignant melanoma
- On (pericardium - myocardium - endocardium - great vessels)

Lymph node secondaries of malignant melanoma

- Large round black mass: representing metastasis from malignant melanoma
- They are 2 lymph nodes cut into 2 halves

Adenocarcinoma of the large intestine (exophytic fungating type) with secondaries in regional lymph node

- Fungating cauliflower mass
- interruption of the muscle layer
- metastasis in pericolic lymph node

Adenocarcinoma of the large intestine (endophytic ulcerative type)

- Ulcerating malignant mass with everted edge, necrotic floor
- interruption of the muscle layer

Adenocarcinoma of the colon (endophytic stenosing type)

- Stenosing mass indicating invasion
- interruption of the muscle layer

Benign tumour "mesenchymal"

Subcutaneous lipoma

- Subcutaneous tumor mass
- encapsulated, lobulated & yellowish

Locally malignant tumour

Osteoclastoma (giant cell tumour) of Fibula

- Tumour causes expansion, thinning and destruction of Fibula
- No new bone formation
- Hemorrhage & necrosis

Degeneration

Amyloid degeneration of the liver

- Cut surface is waxy
- Mosaic appearance (Brown → amyloid - Yellow → fatty changes)

Fatty infiltration of the heart

- enlarged heart
- Thick yellowish fatty material deposited under visceral layer of Peri.

Fatty degeneration in uterine

Leiomyoma

- Concentric manner arrangement of smooth muscle fibers (whorly appearance)
- Yellow areas → fatty changes

Myxomatous degeneration in uterine leiomyoma

- rim of smooth muscle fibers arranged in concentric manner
- large cystic spaces containing jelly-like mucoid material → myxomatous degeneration

Brown atrophy of the heart

- ↓ diminished size of heart in relation to large vessels
- Tortuous coronary arteries
- Window → brown & thin myocardium

Dystrophic calcification in thyroid adenoma

- encapsulated tumour
- chalky white area of dystrophic calcification

Acute inflammation

Acute suppurative appendicitis

- Proximal half is normal
- Distal half shows swelling and serosa is opaque
- Some areas are:
 - Yellow → suppuration
 - black → gangrene

Serofibrinous pericarditis

- Heart of a child
- Fluffy exudate giving bread and butter appearance.
- surface of heart is hyperemic

Lobar Pneumonia

- Gray hepatization: solid - airless
- Yellow in flamed Parenchyma
- Anthracosis

Granuloma

Tuberculous pericarditis

- Yellow focally hemorrhagic shaggy exudate
- mediastinal lymph node with caseating areas and anthracosis

Chronic Fibrocasseous pulmonary tuberculosis with secondary miliary spread

- Apical tuberculous cavity lined by fibrous tissue
- Minute pale yellow caseating foci

Chronic tuberculosis of kidney (Surgical type)

- Multiple pale yellow caseating foci at cortex and cortico-medullary junction
- Hydronephrosis
- The caseous material is shedded leaving multiple cavities

Caseating tuberculous epididymo-orchitis

- The epididymis is enlarged with caseation and cavitation
- The testis is enlarged with multiple tuberculous caseating foci

Caseating tuberculous lymphadenitis

- Multiple yellowish caseating foci replacing nodal tissue
- Areas of dystrophic calcification

Tabes mesenterica

- Multiple yellowish caseating foci replacing nodal tissue
- Some node are fused together "matted" due to periadenitis
- They are surrounded by fibrous tissue

Miliary tuberculosis of the spleen

- It is studded by small yellowish caseating foci
- Some nodules coalesced together giving larger nodule

Tuberculoma of the brain

- Big tuberculoma appearing as cheesy caseous pale yellow erasing brain convolutions
- It reaches depth of brain tissue in both sides of cut section

Leprosy

- Drooping of all toes
- Thin atrophic skin with hypopigmentation

Foreign body granuloma in a toe

- Whitish firm rounded mass in the middle of the toe
- A foreign body (piece of wood)

Bilharzial polypi of the colon

- Multiple bilharzial polypi
- The muscle layer is continuous with no interruption → benign

Bilharzial polypi of the colon with pericolic mass

- Multiple bilharzial polypi
- The muscle layer is continuous with no interruption → benign
- Large grayish with pericolic mass

Bilharziasis of the urinary bladder (Sandy patches)

- The mucosa shows dirty grayish yellow granular areas (sandy patches)
- Thickened bladder wall and small size

Bilharzial polypi of the urinary bladder with hydronephrosis and hydroureter

- The trigone shows multiple bilharzial polypi
- Hydroureter and hydronephrosis

Bilharzial periportal fibrosis

- Pale brown due to anemia and bilharzial pigment
- Periportal fibrosis giving pipe stem appearance

Hemodynamic disorders

Chronic venous congestion of the liver (nutmeg liver)

- Mottled brown (blood) and yellow (fat)
- Hepatic veins are dilated

Chronic venous congestion of the lung (brown induration)

- Voluminous lung with tense capsule
- Brown color due to hemosiderin

Pulmonary embolism

- Pulmonary arterial branches are obstructed by brown embolus (detached thrombus)
- Lung is healthy (sudden death) due to cardiorespiratory failure

Splenic infarction

2 areas of infarction:

- White in color
- Triangular with apex towards hilum base towards free border

Myocardial infarction with mural thrombi

- Pale white infarction in the left ventricle
- mural thrombi
- Thinning of the apex of the ventricular wall