Chapter 16

Inflammation → injury to liver cells with an influx of acute/chronic inflammatory cells
Foamy Degeneration → material retained bilaterally that gives a diffuse, foamy, swollen appearance
Steatosis → accumulation of fat in hepatocytes
Microvesicular steatosis → many little droplets that doesn't displace the nuclei
Macrovesicular steatosis → one large droplet that displaces the nuclei
Necrosis → Ischemic necrosis, councilman bodies from apoptosis
Centrilobular necrosis → necrosis of hepatocytes around the central vein
Focal necrosis → limited to scattered cells
Submassive necrosis → entire lobule of liver
Massive necrosis → most of the liver
Fibrosis → formed in response to inflammation or direct toxic insult to the liver, irreversible
Cirrhosis → due to continuing fibrosis and parenchymal injury
Jaundice/Icterus → skin and sclera turning a yellow color
Unconjugated bilirubin → water insoluble at physiological pH, cannot be excreted in urine
Conjugated bilirubin → water soluble, non-toxic, can be excreted thru urine
Cholestasis → arise from intra and extrahepatic obstruction and can cause jaundice
    Pruritis (itching), Skin xanthomas, elevated serum alkaline phosphate
    Unrelieved obstruction leads to portal track fibrosis
Hepatic failure
        Massive hepatic necrosis
        Chronic liver disease
        Hepatic dysfunction without overt necrosis
    Jaundice, hyperammonemia, fector hepaticus, palmer erythema and spider angiomas
Hepatic encephalopathy
    -rigidity, hyperreflexia, non-specific EEG changes, seizures, and asterixis
asterixis → a pattern of nonrhythmic rapid extension-flexion movements of the head and extremities
Cirrhosis → end stage chronic liver disease has 3 characteristics
        Bridging fibrous septa
        Parenchymal nodules
        Architectural disruption of the entire liver
    Major source of the collagen seems to be the fat-storing stellate cell or Ito cell. Cirrhosis Type 1, 3
Portal Hypertension
    Major cause is right-sided heart failure
    Dominant intrahepatic cause is cirrhosis
    Ascites refers to a collection of excess fluid in the peritoneal cavity
Portosystemic shunts
    Principal sites are at the hemorrhoidal veins and cardioesophageal veins (esophageal varices)
    Appears in abdominal wall → caput medusae
Hepatits A Virus → infectious hepatitis
Hepatits B Virus → serum hepatitis
    Blood and body fluids
Acute hepatitis → anicteric or iceteric
Chronic Hepatitis → symptomatic, biochemical or serological evidence of continuing or relapsing hepatic disease form more than 6 months
Fulminant hepatitis → progresses from the onset of symptoms to hepatic encephalopathy
Alcoholic liver disease
    Up to the time that fibrosis appears the fatty change is completely reversible if there is abstention from further intake of alcohol
    Hepatocyte swelling and necrosis, Mallory bodies, neutrophilic reaction, fibrosis
Alcoholic cirrhosis →over a span of years it's transformed into a brown shrunken, non-fatty organ < 1kg
    Wernicke-Korsakoff syndrome
    Mild elevations of bilirubin and alkaline phosphate
    End stages → hepatic failure, massive GI bleeding, intercurrent infections, hepatorenal syndrome
Hemochromatosis → excessive accumulation of body iron
    Micronodular cirrhosis, diabetes mellitus and skin pigmentation
    Iron is stored as ferritin and can be used as needed, insoluble iron is called hemosiderin
Wilson's disease → accumulation of toxic levels of copper in many tissues and organs
    Based on a decrease in serum ceruloplasmin, increase in hepatic cpper content and increased urinary copper excretion
    Keyser Fleuscger rings → seen in the eyes
Secondary biliary cirrhosis → most common cause is cholelithiasis (gall stones)

Primary biliary cirrhsis → destruction of bile ducts, elevated alkaline phosphate and cholesterol levels, hyperbilirubinemia, and autoantibodies
Cirrhosis → MCC of impaired blood flow through the liver. Sicle Cell amemia
Liver cell adenoma is a benign neoplasm of hepatocytes
Most primary carcinomas of the liver arise from liver cells and are termed hepatocellular carcinoma
    Less common are cholangiocarcinomas and malignant angiosarcoma → bile ducts
Choledocholithiasis → presence of stones in the biliary tree
Cholangitis → acute inflammation of the wall of bile ducts

Chapter 17

Acute pancreatitis → associtated with acinar cell injury, acute onset of abdominal pain resulting from enzymatic necrosis and inflammation of the pancreas
    Elevation of pancreatic enzymes
    MCC are gallstones and alcoholism
    Inappropriate activation of the proenzyme trypsinogen into trypsin inside the acini
        Pancreatic duct obstruction caused by gallstone impacting the papilla of Vater
        Primary cell injury
        Defective intracellular transport of proenzymes with acinar cells
    Localization in the epigastrum with radiation to the back is characteristic, elevated serum amylase
Chronic Pancreatitis → repeated bouts of mild/moderate pancreatic inflammation
Carcinoma of the pancreas → arising in the exocrine part of the gland
    With carcinoma of the pancreatic head, ampullary region is invaded, obstructing bile outflow
    Cancer of the body and tail are large and disseminated by the time discovered
    Obstructive jaundice is associated with most cancers of the head
    Migratory thrombophlebitis (trousseau's sign) seen with any part of the pancreas
Endocrine pancreas
    Beta cells → insulin
    Alpha cells → glucagons
    Delta cells → somatostatin
    PP Celss → pancreatic polypeptide
Diabetes mellitus
    Type 1 → insulin-dependent, juvenile onset diabetes
    Type 2 → non-insulin dependent diabetes, adult onset
    Long-term complications in blood vessels, kidneys, eyes, and nerves occur in both types and are the major causes of morbidity and death from diabetes
    Most important stimulus that triggers insulin release is glucose, which initiates insulin synthesis
    Insulin is a major metabolic hormone
Type II Diabetes
    Insulin reisistance is a major factor in the development of type II diabetes
    Obesity with reduction of exercise
    Polyureia, polydipsia, polyphagia
Hyperinsulism → insulinomas → tumors of islet cells that secrete insulin and cause hypoglycemia, by fasting or exercise
Zollinger-Ellison Syndrome – Gastinomas – hypersecretion of gastrin that stimulates acid secretion in the stomach

Chapter 18

Hypospadias → abnormal opening of the urethra along the ventral aspect of the penis
Balantis/balanoposthitis → local inflammation of the glans penis and/or prepuce
Phimosis → when prepuce cannot be retracted easily over the glans
Paraphimosis → stenotic prepuce is forcibly pulled back over the glans resulting in congestion of the distal penis resulting in pain and even urinary retention
Hydrocele is the MCC of scrotal enlargement → accumulation of serous fluid w/in the tunica vaginalis due to infections, tumors.
Hematoceles → accumulation of blood in the tunica vaginalis
Chyloceles → accumulation of lymph in the tunica vaginalis
Varicoceles → dilated enlarged veins that drain into the testes and feel like a "bag of worms"
Cryptorchidism → failure of testicular descent into the scrotum. Risk of testicular malignancy
Gonorrhea and chlamydia are commonly involved → affected testicle is swollen and tender
Testicular neoplasms are most important cause of firm, painless enlargement of the testis
Acute bacterial prostatitis → caused by E.coli and other gram negative rods
    Dysuria, ,urinary frequency, lower back pain, and poorly localized pelvic pain

Nodular hyperplasia (glandular and stromal hyperplasia) → common abnormality of the prostate
    Lower urinary tract obstruction, hesitancy, urinary urgency, frequency, and nocturia
Prostate Carcinoma
    Palpable by rectal digital examination
    PSA is used for early detection
Syphilis → T. pallidum – crosses placenta
    Primary syphilis → chancre at the site of initial inoculation – hard chanrce
    Secondary syphilis → generalized lymph node enlargement, involves palms and soles of feet
        Condylomata lata
    Tertiary syphilis → 3 catagories
        Cardiovascular – syphilitic aortitis
        Neurosyphilis – tabes dorsales
        Benign tertiary syphilis – gummas in bone, skin, and mucous membranes
            Argyll Robertson pupil
    Congenital syphilis → when it crosses placenta – Infantile syphilis, late/tardive syphilis
        Hutchinson triad
            Notched central incisors
            Interstitial keratitis
            Deafness from damage to 8th cranial nerve
Gonorrhea → N.gonorrhea
    Urinary frequency and mucopurulent urethral exudate manifest gonorrhea
Nongonococcal Urethritis and Cervicitis → MC forms of STDs today
    Mucopurulent discharge containing a predominance of neutrophils
Chancroid → third venereal disease
    Hemophilus ducreyi → MCC of genital ulcers
Genital Herpes
    HSV – 2 is MC, HSV – 1 is next
    Episodes of recurrent disease are common during the first several years but tend to be milder and shorter duration
    Neonatal herpes → affected thru birthing process

Chapter 19

Lichen sclerosis → thinning of the epidermis and disappearance of the rete pegs
Condylomata lata → result of syphilis, is flat, moist, minimally elevated lesions
Vaginits → prodcing a vaginal discharge called leukorrhea
    Candida albicans → curdy, white discharge with no odor
    Trichomonas vaginalis → water, copious gray-green discharge with foul odor
Cervical inatraepthelial Neoplasia (CIN)
    CIN 1 → mild dysplasia – lower 1/3 of epithelium shows changes
    CIN II → moderate dysplasia – later ½ of epithelium shows changes
    CIN III → severe dysplasia and carcinoma in situ – marked dysplasia to the surface epithelium
Endometriosis → causes infertility, dysmenorrhea, pelvic pain, and other problems
Menorrhagis → profuse bleeding at time of period
Metrorrhagis → irregular bleeding between periods
Ovulatory bleeding → intermenstrual bleeding
Dysfunction uterine bleeding → abnormal bleeding in the absence of a lesion in the uterus
Salpingitis → inflammation of the tubes
Salpingo-oophoritis → inflammation of the ovaries
Polycystic ovaries/Stein-Leventhal syndrome → oligomenorrhea, hirsutism, and obesity in young women
Benign (mature) cystic teratomas → cyst with hair, bone, teeth, cartilage
Ectopic pregnancy → lower abdominal pain and missed period by two weeks
Preeclampsi → development of hypertension with proteinuris and edema
Eclampsia → seizures and convulsions involved