Block L Ospe KGMC 2024

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Patho

Nebothian cyst

It is a mucus filled cyst on the surface of cervix. They are most often caused when stratified squamous epithelium of ectocervix grows over the simple columnar epithelium of endocervix.

Benign, mucus-filled cervical gland cyst due to blocked endocervical glands, commonly found on the cervix, asymptomatic, and requires no treatment.

Dating of endometrium

“Dating the Endometrium" refers to the process of examining the histological features of the endometrium (the lining of the uterus) to determine its phase in the menstrual cycle

The indications for dating an endometrial biopsy include evaluating abnormal uterine bleeding, investigating infertility, assessing hormonal imbalances, and diagnosing endometrial disorders.

Menstrual Cycle Phases and Corresponding Endometrial Changes

Menstrual Phase (Days 1-5)
- Endometrial shedding and bleeding
- Basal layer remains intact

Proliferative Phase (Days 6-14)
- Endometrial regeneration and growth
- Glandular and stromal proliferation

Secretory Phase (Days 15-28)
- Glandular secretion and decidualization
- Stromal edema and predecidual reaction

Luteal Phase (Days 15-28)
- Maintenance of secretory changes
- Preparation for potential implantation

Dating Criteria

Pathologists use various criteria to date the endometrium, including:

1. Glandular morphology and secretion
2. Stromal cellularity and edema
3. Decidualization and predecidual reaction
4. Blood vessel morphology

By evaluating these features, pathologists can estimate the day of the menstrual cycle, which can be useful in various clinical contexts, such as:

1. Evaluating infertility or irregular menstrual cycles
2. Dating pregnancy
3. Diagnosing endometrial pathology

Histological and physiological features	Early proliferative Days 5-7/28	Mid proliferative phase Days 8-10/28	Late proliferative phase Days 11-14/28	Secretory phase Days >15/28
Thickness	Flat epithelium Thin endometrium	Higher endometrium	Slightly less thick endometrium	Day by day changes (excluded)
Glands : regularly spaced+++	Sparse, narrow, and straight glands	More numerous glands. Beginning of tortuosity	Marked tortuosity of glands	/
Epithelial cells	Cuboid or low columnar cells	Tall columnar cells. No pseudostratification	Pseudostratifi-cation	/
Stroma	Loose stroma of spindle-shaped cells	Interstitial edema	Interstitial edema subsided	/

Cervical cancer risk factors

MODIFIABLE RISK FACTORS

- HPV infection
- Smoking
- Immunosuppresion
- Multiple sexual partners
- Early sexual activity
- Poor diet and nutrition

NON MODIFIABLE RISK FACTORS

- Age (most cases in women between 35 and 55 years old)
- Family history
- Genetic predisposition

Ductal carcinoma in situ characteristics

- No penetration of basement membrane
- Preceded by ductal atypia
- Frequently appears as a pattern of grouped microcalcifications on mammograph

Ductal carcinoma risk factors

- Age (>40)
- Family history
- BRCA1 and BRCA2 mutations
- Radiation exposure
- Long term use of HRT
- Obesity
- Physical inactivity
- Alcohol consumption

Renal stones types

- Calcium oxalate and calcium phosphate
- Ammonium magnesium phosphate
- Uric acid
- Cysteine

Most common renal stones - calcium oxalate and calcium phosphate

2nd most common type - AMP stones

Nephrotic Syndrome

- Main problem in nephrotic syndrome is massive proteinuria (more than 3.5g/day)
- Cause of edema - hypo Albuminemia
- Clinical Features - massive proteinuria, hypo Albuminemia, edema, lipiduria, hypercoagulibility

Nephritic syndrome

- Main problem in nephritic syndrome is sodium water retention (as sodium water is retained due to damaged filtration barrier of kidney)
- Cause of edema - sodium water retention
- Clinical Features - microscopic hematuria, mild proteinuria, HTN, edema, oliguria

Nephrotic syndrome

- Minimal change disease
- Focal segment glomerulosclerosis
- Membranous nephropathy
- Membranoproliferative Glomerulonephritis
- Diabetes mellitis
- Systemic amyloidosis

Nephritic syndrome

- Poststreptococcal Glomerulonephritis
- Rapidly proliferative Glomerulonephritis
- IgA nephropathy (Berger disease)
- Alport syndrome

Tram track appearance seen in - membranoproliferative Glomerulonephritis

Spike and dome appearance seen in - membranous nephropathy

Renal tumors classification and genes

- Clear cell carcinoma - mutation in VHL gene, chromosome 3p
- Papillary cell carcinoma - mutation in MET gene

Addison disease

- Chronic adrenal insufficiency due to progressive destruction of adrenal glands
- Causes - Autoimmune destruction, TB, metastatic carcinoma e.g. arising from lung
- Clinical Features - hypotension, hyponatremia, hypovolemia, hyperkalemia, weakness, hyperpigmentation, vomiting, diarrhea

Cushing disease

- Pituitary ACTH secreting tumor

Diagnostic tests of Addison and cushing disease

Acromegaly

- Increased production of growth hormone in adults
- Enlarged bones of hands, feet, and jaw
- Growth of visceral organs leading to dysfunction (e.g. Cardiac failure)
- Enlarged tongue

Diagnostic test for diabetes

- Fasting plasma glucose test (>126 mg/dL)
- Oral glucose tolerance test (>200 mg/dL)
- HbA1c (>6.5%)
- Random plasma glucose test (>200mg/dL)
- Urine glucose test

Pituitary adenoma

Pituitary adenoma is a type of tumor that occurs in the pituitary gland.

Classification of pituitary adenoma

- Prolactinoma - secrete prolactin, causing hyper prolactinemia
- ACTH secreting adenoma - secrete ACTH, causing cushing disease
- TSH Secreting adenoma - secrete TSH, causing hyperthyroidism

What are glomerular diseases

Refers to a group of kidney disorders that affect the glomeruli and include the nephrotic and nephritic diseases.

Nephrotic range proteinuria >3.5 g/day

Autoimmune glomerular diseases

- Anti GBM disease (Goodpasture syndrome)
- Lupus nephritis
- IgA nephropathy (Berger disease)

Triple negative Receptor breast cancer

- Triple negative tumors are negative for estrogen receptors, progesterone receptors, and HER2/neu. They have a poor prognosis

Pituitary apoplexy

- It is a rare and potentially life threatening condition that occurs when there is sudden bleeding or infarction in the Pituitary gland
- Causes - Pituitary adenoma, head trauma, radiation therapy, Anticoagulation therapy
- Symptoms - severe headache, visual disturbances, nausea and vomiting, altered mental status, hormonal imbalance

Difference between hyperthyroidism and thyrotoxicosis

Hyperthyroidism refers to increased level of circulating thyroid hormone.
Its causes include:
- Graves disease
- Toxic multinodular goiter
- Amiodarone
- Iodine load

Thyrotoxicosis (thyroid storm) refers to life threatening hyperthyroidism.

What happens if IGF is increased
Insulin like growth factor plays a crucial role in regulating cell growth, differentiation, and survival.

Positive effects of increased IGF
- Muscle growth and strength
- Bone growth and density
- Wound healing

Negative effects of increased IGF
- Insulin resistance and type 2 diabetes
- Acromegaly

Congenital adrenal hyperplasia
- Excess sex steroids with hyperplasia of both adrenal glands
- Inherited 21-hydroxylase is the most common cause
- Low cortisol as well aldosterone
- Low cortisol leads to hypoglycemia, nausea/ vomiting
- Low aldosterone leads to hyponatremia, hyperkalemia, hypovolemia

Hydatidiform mole morphology
- Abnormal conception characterised by swollen and edematous villi with proliferation of trophoblasts
- Classically presents in the second trimester as passage of grape like masses through the vaginal canal

Causes of Adrenal insufficiency and crisis

- Autoimmune destruction
- TB
- Metastatic carcinoma (e.g. arising from lung)

Cushing disease vs cushing syndrome

- Cushing syndrome - A hormonal disorder caused by prolonged exposure to excess cortisol
- Causes of Cushing syndrome - exogenous corticosteroid use, adrenal gland tumors or hypeplasia, familial cushing syndrome, ectopic ACTH producing tumor (e.g. Small cell carcinoma of lung)
- Cushing Disease - A specific type of Cushing syndrome caused by qn ACTH secreting Pituitary adenoma

Most common ovarian epithelial tumor

- Serous cystadenoma

Theories of endometriosis

- Coelomic metaplasia theory - endometriosis arise from metaplasia of celle lining the pelvic cavity, which then differentiate into endometrial like tissue
- Embryonic cell theory - suggests that endometriosis results from abnormal migration of embryonic cells during fet development, leading to presence of endometrial tissue outside the uterus
- Retrograde menstruation theory - suggests that endometriosis occurs when menstrual blood flows backward through the fallopian tubes and into the pelvic cavity, implanting endometrial cells on pelvic organs
- Vascular theory - suggests that endometriosis result from abnormal growth of blood vessels, which then give rise to endometrial like tissue

Secondary hyperparathyroidism

- Excess production of PTH due to a disease process extrinsic to parathyroid gland
- MCC is chronic renal failure
- Other causes include: Vit D deficiency, hypocalcemia, hyperphosphatemia, malabsorption syndromes, liver disease, rickets, osteomalacia, GIT surgery

Triple negative breast carcinoma test

Receptors status tests

- Estrogen Receptor test - measures presence or absence of estrogen receptors in tumor cell
- Progesterone Receptor test
- HER2 test - measures presence or absence of excess HER2 protein in tumor cells

Ovarian cyst marker - CA 125

Causes of hypothyroidism

Cause of hyperthyroidism

Most common kidney stones - calcium oxalate

Forensic

Sexual perversions definitions

Human organ transplation act

- Purpose: Regulates organ donation and transplantation, prevents illegal trade.
- Living Donor: Only close relatives can donate organs.
- Brain Death: Organ donation allowed with family consent.
- Approval: Unrelated donors need ethical committee approval.
- Punishment: Up to 10 years jail and fines for illegal organ trade.
- Authority: Human Organ Transplant Authority (HOTA) oversees implementation.

Zina definition

Zina is willful sexual intercourse without being validly married to each other.

Isqat e hamal

- Whoever causes a woman with child whose organs have not been formed to miscarry; if such a miscarriage is not caused in good faith for purpose of saving life of woman or providing her necessary treatment is said to cause isqat e hamal
- A woman herself causing isqat e hamal is also punishable
- Punishment for isqat e hamal is imprisonment for 3 years if with consent of woman and 10 years if without consent of woman.

Isqat e janin

- Whoever causes a woman with child whose organs have developed to miscarry; if such a miscarriage is not caused in good faith for purpose of saving life of woman or providing her necessary treatment, it's said to cause isqat e janin
- A woman herself causing isqat e janin is also punishable
- Punishment
    - One twentieth of diyat if child was born dead
    - Full diyat if child was live born and died by an act of offender
    - Imprisonment for 7 years
    - If there are more than 1 child, separate diyat for each
    - If during this hurt is caused to woman (as it is without consent) separate punishment for this

Medicolegal importance of IVF and test tube babies

Examination of rape victim

- Informed consent should be obtained
- Examination should be made in presence of a third person
- Female examination should be done by or under the supervision of a female doctor
- A full examination include:
    - Preliminary data
    - Statement of victim and others separately
    - Signs of struggle on clothes and body
    - Examination of genitals, urethra, mouth and anus
    - Collection of lab specimens
    - Inference
    - Advice on follow up

Examination of sodomy victim

- Same as rape examination
- Plus anal inspection, proctoscopy

Hegar sign

In 6th week of pregnancy, lower uterine segment become soft and compressible

Goodell sign

Softening of cervix from below upwards from 2nd month onwards due to increased vascularity. Cervix is felt as soft as lips. One of the earliest signs of pregnancy.

Heger sign is located in lower part of uterus, just above the cervix. While Goodell sign is softening of cervix.

Impotence (female causes)

Abortion

- Abortion means the expulsion or extraction of product of conception at any period of gestation before viability
- Legally - It is induced or spontaneous termination of pregnancy from the time of conception to the time of confinement

Complications of abortion (immediate)

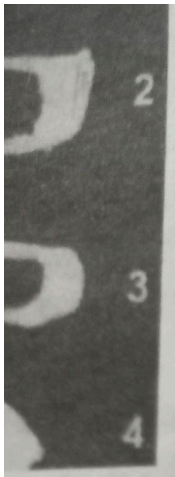
- Trauma - excoriation, laceration, tears, perforations in upper part of vaginal canal and fissures
- Hemorrhage
- Shock

    - By touching the cervix with an instrument, also called trigger area, reflex cardiac inhibition occurs called the vasovagal shock which leads to instantaneous cardiac arrest and death.
    - Introduction of or removal of fluid from uterus may also lead to shock. Introduction of fluid into the uterus through a syringe separates the membrane from uterine wall and exposes the uterine raw surface through which air and fat may enter the maternal circulation forming air embolism and fat embolism which enters the right side of heart and causes death in a few minutes to few hours. Marked cyanosis and death may be the manifestation of an embolism.
- Infections
    - Pelvic abscess
    - pelvic peritonitis
    - Salpingitis
    - Oophoritis
    - Endometritis
    - Septicemia
    - Tetanus
    - Parametritis
    - Abdominal peritonitis
    - Common bacteria responsible for infections are - E coli, staphylococci, hemolytic and non hemolytic streptococci
- Poisoning due to drugs

Conditions of illegitimate child

- Born out of a lawful wedlock
- not born within a competent time after the dissolution of marriage by divorce, or death of husband
- Born within lawful wedlock when procreation by husband was not possible bcz
    a) He was under the age of puberty
    b) He was physically incapable of procreation due to illness, malformations, Impotence, or sterility
    c) He did not have sexual access to his wife during the time that the child could have been begotten
    d) There is incompatibility between the blood group between child and alleged father
- An illegitimate child becomes legitimate by subsequent marriage of parents, if the child is born out of lawful wedlock.

Difference between criminal and natural abortion



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abortion. Marks of violence on the abdomen or wounds on the membranes or on foetus provide positive evidence of criminal interference. Table 30.1 summarises the salient distinguishing features of natural and criminal abortions.

Table 30.1: Distinguishing features of natural and criminal abortions

	Natural abortion	*Criminal abortion*
1. Cause	Predisposing diseases	Pregnancy in unmarried women and widows
2. Genital injuries	Not usually present	May be present
3. Foreign body in genital tract	Nii	May be present
4. Sepsis	Not usually	Frequent
5. Signs of violence on abdomen	Nil	May be present
6. Toxic drug effects	Nil	May be present
7. Foetal injuries	Nil	May be present

Criminal abortion autopsy samples

- Fetal tissue
- Blood samples
- DNA Samples

Placenta medicolegal importance

- Gestational age of fetus
- Paternity testing
- To find cause of stillbirth or neonatal deaths
- Fetal and maternal health
- Insights into genetic disorders, trauma, infections

Duties of doctor in criminal abortion

- The ethical or moral duty of a doctor is to preserve the life of the patient
- Legal duties
    - Take a written informed consent
    - If she is dying, immediately arrange for dying declaration
    - If patient dies during operation, do not issue any death certificate but immediately inform local police
    - The proper recording or charting of patient condition must be done
    - Preserve the products of conception, any foreign body, drugs, pills extracted from the uterus for 6 months

Lochia

- It is a discharge from the uterus and vagina after the delivery lasting from 14-15 days. It has a peculiar disagreeable odor. It contains RBCs, leucocytes, decidual debris, vaginal epithelium, peptones and cholesterol crystals.
- In the first 3-4 days, it is red due to fresh blood and clots and is known as **lochia rubra**.
- In the next 3-4 days, it changes from red to pale or serous in nature and is called **lochia serosa**
- In the next 4-5 days, the color changes to yellowish grey or slightly greenish and is called **lochia alba**.
- Gradually the coloration is lost and lochia completely disappears in about 15 days.
- Lochia is a part of healing process of uterus after delivery.

Pregnancy total days

- 40 weeks or 280 days

Conclusive signs of pregnancy

- Hearing of fetal heart sounds between 4th and 5th month
- Feeling fetal movements and parts
- Presence of fetus may be diagnosed on X Ray examination as early as middle of 4th month
- Ultrasonography detect fetal heart beat as early as 12th week

- Presence of fetal cells in mother's blood can be detected as early as 5th week of pregnancy

Delayed, systemic criminal abortion complications

- Trauma - Excoriation, laceration, tears, perforations in upper part of vaginal canal and fissures
- Hemorrhage
- Shock
- Infections
- Poisoning due to drugs

Superfetation

Fertilisation of two separate ova discharged from the ovary at different points of ovulation

Super fecundation

Fertilisation of two separate ova which have been discharged from ovary at the same period of ovulation by two separate acts of coitus

Arbor vitae

Mucosal folds in the cervical canal, which extends from internal to external os.

Medicolegal importance of pregnancy

- A pregnant woman has the privilege to be excused from attending the court as a witness if her doctor is sure that certain complications may arise if she is forced to attend the court or if the delivery is imminent
- A pregnant woman is entitled to the estate left by her husband on behalf of prospective heir
- When a convicted woman pleads to be pregnant, as a bar to hard labor or execution
- When a woman blackmails a person and accuses him that she is pregnant bcz of him
- When a woman asks for termination of pregnancy after rape
- When a woman claims for money after divorce on account of being pregnant

Un natural sexual offences

Sexual gratification is obtained other than natural ways

- buccal coitus
- sodomy
- bestiality
- trabadism

Pharmacology

Drugs for diabetes classification

- Biguanides - Metformin

- Sulfonylureas - Chlorpropamide - stimulate insulin secretion from beta cells of pancreas
- GLP1 agonists
- DPP4 Inhibitors - Saxagliptin, vildagliptin
- SGLT2 Inhibitors
- Thiazolidinediones - increase sensitivity of peripheral tissues to insulin

Insulin preparations

Rapidly acting insulin analogues
- Insulin lispro
- Insulin Aspart
- Insulin Glulisine

Short acting insulin
- Zinc insulin

Intermediate acting insulin
- NPH (Neutral Protamine Hagedorn) insulin
- Isophane insulin

Long acting insulin
- Insulin Glargine
- Insulin detemir

MOA of sulfonylureas and adverse effects of sulfonylureas

Anti thyroid drugs
- Thyroid hormone synthesis Inhibitors - Propylthiouracil, methimazole, carbimazole
- Inhibitors of Iodide Trapping - thiocyanates, perchlorates
- Hormone release Inhibitors - iodine, organic iodide, iodides of sodium and potassium
- Thyroid tissue destroying agent - Radioactive Iodine I-131
- Others - Propranolol, atenolol, diltiazem, dexamethasone

Contraceptive drugs - estrogen and protesterone

Anti estrogen
- Tamoxifen - competitive antagonist on estrogen receptor in breast
- Raloxifene - competitive antagonist on estrogen receptor in breast, endometrium and myometrium
- Clomiphene - block hypothalamic estrogen receptors, thereby inhibiting negative feedback and increasing release of FSH and LH to trigger ovulation

Anti progesterone
- Mifepristone - blocks progesterone receptors in corpus luteum, leading to its dehiscence

- Ulipristal - selective progesterone receptor Modulator that affects ovulation and implantation

Estrogen Receptor modifiers
- Tamoxifen - competitive antagonist on estrogen receptor in breast
- Raloxifene - competitive antagonist on estrogen receptor in breast, endometrium and myometrium

Sulfonylureas MOA
- Stimulate insulin secretion from beta cells of pancreas

Tamoxifen
- Competitive antagonist on estrogen receptors of breast
- Agonist on estrogen receptors in bone tissue, endometrium, myometrium

Clomifene citrate
- block hypothalamic estrogen receptors, thereby inhibiting negative feedback and increasing release of FSH and LH to trigger ovulation

Growth antagonist
- Somatostatin Analogues - Octreotide, Lanreotide
- Dopamine receptor agonist - Bromocriptine, cabergoline
- GH Receptor Antagonist - pegvisomant

Estrogen side effects
- Endometrial cancer
- Thromboembolic events
- Vaginal clear cell adenocarcinoma (in patients exposed to DES in utero)
- Increased cardiovascular conditions

Danazole
- Androgen Agonist
- Weak androgenic, glucocorticoid, and progestational activities
- Partial agonist action on androgen Receptor
- Suppress endometrial estrogen and progesterone receptors
- Indications: endometriosis, uterine leiomyoma, hereditary angioedema
- Adverse effects: acne, hirsutism, hepatotoxity, idiopathic intracranial hypertension

Effect of estrogen on infertility, male and female both

Injectible contraceptives
- DMPA - once in 3 months
- NET-EN - once in 2 months

Oral contraceptives side effects

Iodine 131 MOA

Methimazole MOA

- Inhibit thyroid hormone production via Inhibition of thyroid peroxidase (blockade of iodine oxidation, organification, coupling)

B blockers role in tx of hyperthyroidism

- sympathetic overstimulation opposition
- And inhibition of peripheral conversation of T4 to T3
- Antithyroid drugs

Medicine

Diabetic foot examination

Diabetic foot for ulcer examination

Thyroid examination

Surgery

Breast examination

Breast lump history, investigation, treatment options

Community

OCPs

- COCPs - estrogen and progesterone
- Progestin only pill (minipill) - levonorgestrel, norgestrel

T Tube

- IUD is a small T shaped device that is inserted in the uterus to prevent pregnancy.
- Non hormonal - copper containing IUD
- Hormonal - progestin releasing

Breast feeding benefits

- It is safe, hygeinic, cheap and available to infant at correct temperature
- It fully meets the nutritional requirement of infant in the first few months of life

- It contains antimicrobial factors such as macrophages, lymphocytes, secretory IgA, anti sptreptococcal factor, lysozyme and lactoferrin which provide considerable protection not only against diarrheal diseases and necrotizing enterocolitis, but also against respiratory infections in first months of life.
- It is easily digested and utilized by both normal and preterm babies
- It promotes bonding between mother and infant
- It protects babies from tendency to obesity
- Special fatty acids in breast milk lead to increased intelligence quotients and better visual acuity

Types of water pollution
- Water pollution caused by natural impurities
- Water pollution caused by human activities

Sand filter

Hospital waste management steps
- Segregation
- Collection
- Transportation
- Treatment
- Disposal
- Monitoring and regulation

On average, hospitals generate around 10-25% of hazardous waste and 75-90% of non-hazardous waste.

Occupational health definition
Occupational health is a multidisciplinary field concerned with the safety, health and welfare of people at work.

WHO Definition - Occupational health deals with all aspects of health and safety in the workplace and has a strong effect on primary prevention of hazards

Ergonomics definition
Ergonomics is the study of the kind of work people do, the environment they work in, and the tools they use to do their job.
It is concerned with the study of interaction of human with the system they work in.

Disaster definition
Any occurance that causes damage, ecological disruption, loss of human life or deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community or area

Hazard definition
Any phenomenon that has the potential to cause disruption or damage to people and environment

Examples of different types of hazards

NATURAL DISASTERS

- Meteorological - windstorms, tornadoes, hailstorms, snowstorms, sea surges, floods, dam bursts, droughts
- Topographical - earthquakes, volcanic eruptions, landslides, tsunamis
- Environmental

MAN MADE DISASTERS

- Technological
- Industrial accidents
- Vehicular accidents
- Caused by warfare - conventional warfare, nuclear, biological, chemical warfare, terrorism

Calculation of growth rate

Mortality rate definition
Mortality rate is the measure of the number of deaths in a given population during a specific time period, typically expressed per 1,000 or 100,000 individuals.

Growth rate definition
Population growth rate is the percentage increase or decrease in a population over a specific period, usually per year. It reflects how fast a population is expanding or shrinking.

Causes of Iodine deficiency

- Low iodine intake
- Consumption of food that interfere with utilisation of iodine such as cabbage, broccoli
- Poverty
- Pregnancy and lactation
- Hypothyroidism

Prevention of iodine deficiency

- Iodised salt programs
- Food fortification
- Public education

Types of micronutrients
some essential micronutrients:

1. Vitamin A
2. Vitamin B complex (B1, B2, B3, B5, B6, B7, B9, B12)
3. Vitamin C
4. Vitamin D
5. Vitamin E
6. Vitamin K
7. Iron
8. Calcium
9. Magnesium
10. Zinc

Obesity stages

- Stage 1: Overweight (BMI 25-30)
- Stage 2: BMI 30-35
- Stage 3: BMI 35-40
- Stage 4: BMI >40

IMNCI

IMNCI is short for Integrated Management of Neonatal and Childhood Illness. It's a strategy to improve healthcare for kids. It focuses on early identification and proper management of common illnesses in children under five.

Antenatal care

Antenatal care is the care of a woman during pregnancy. The primary aim of antenatal care is to achieve by the end of pregnancy a healthy mother and a healthy baby.

Antenatal visits

Ideally the mother should attend the Antenatal clinic once a month during the first 7 months, twice a month during the next month, and thereafter, once a week, if everything is normal.

A minimum of 4 visits covering the entire pregnancy should be the target.
The suggested schedule is as follows

- 1st visit - within 12 weeks, preferably as soon as the pregnancy is suspected, for registration of pregnancy and first antenatal checkup
- 2nd visit - between 14 and 26 weeks
- 3rd visit - between 28 and 34 weeks
- 4th visit - betaeen 36 weeks and term

Postnatal care

Care of mother and the newborn after delivery is known as Postnatal care.

Types of contraception

Sources and deficiency diseases of different nutrients

(see pg 290 of excel)

Types of hazards and how they are caused

Tetanus toxoid schedule in pregnancy

Anthropometric measures

- Height
- Weight
- BMI
- Body circumferences - wasit circumference, hip circumference, arm circumference, head circumference, chest circumference

Slow sand filter (working principle, Schmudzke layer function, pros and cons of slow sand filter)

Calculate the amount of chlorine required to disinfect when length, depth and power of chlorine is given

Biomedical waste

Occupational health definition and its types

HIV and AIDS

HPV Diagnostic test

- Pap smear

3 modes of transfer of STD and HIV

Physical hazards

- Temperature - heat stroke, heat exhaustion
- Radiation
- Fire and explosion
- Extreme weather - hurricanes, tornadoes, floods

Toxic hazards

- Chemical hazards
- Biological hazards - exposure to viruses such as HIV and hepatitis, exposure to bacteria such as E coli, salmonella, exposure to fungi such as aspergillus
- Physical hazards - radiation, asbestos

6 pillars of safe motherhood

1. Family planning

2. Antenatal care
3. Perinatal care/ safe delivery
4. Essential obstetric and post natal care
5. Abortion care
6. STD/ HIV control

Determinants of child development

- Genetic inheritance - Genetic factors influence growth and development especially height and weight, mental and social development and personality
- Nutrition - Nutrition influences growth and development before as well as after birth. In fact, growth retardation is an indication of malnutrition.
- Age
- Sex
- Physical surroundings - sunshine, good housing, lighting and ventilation have their effects on growth and development
- Psychological factors - love, tender care and proper Child-parent relationship do affect the social, emotional and intellectual development of children.
- Certain infections during pregnancy (rubella, syphilis) affect intrauterine growth of fetus. Infections after birth (diarrhea, measles) slow down growth and development esp in the malnourished child
  The intestinal parasites (e.g. Roundwoms) by consuming considerable quantities of nutrients hamper growth and development.

Growth parameters in children

The parameters of growth generally used are: weight, height (or length in infants), and head and chest circumference.

- Weight for age
- Height for age
- Weight for height
- Head and chest circumference - At birth, the head circumference is about 34cm. It is about 2 cm more than the chest circumference.

Assessment of behavioral development

- Motor development
- Personal-social development
- Adaptive development
- Language development

Gonorrhea causative agent - Neisseria gonorrhea

Syphilis causative agent - Traponema pallidum

SDGs related to environment

- Goal 6 - clean water and sanitation

- Goal 7 - affordable and clean energy
- Goal 13 - climate action

Gynae

Hysterectomy scenario; procedure and complications

Female with vaginal discharge scenario. Most common cause, late and early complications

Fibroids pic

Vaginal prolapse

Copper IUD pic, complications, Contraindications