Q 1)POST MENOPAUSAL BLEEDING

Ans) Postmenopausal bleeding (PMB) is defined as any vaginal bleeding occurring after 1 year of amenorrhea in a woman of postmenopausal age.

Etiology:

1. **Endometrial Atrophy:** The most common cause of PMB.
2. **Endometrial Polyps:** Benign growths within the uterus can cause irregular bleeding.
3. **Endometrial Hyperplasia:** Hyperplasia may be simple or complex, with or without atypia, and carries a risk of progression to malignancy.
4. **Malignancies:**
    - **Endometrial Cancer:** The most serious cause of PMB. It is the most common gynecological malignancy in postmenopausal women.
    - **Cervical Cancer:** Bleeding often occurs due to tumor growth disrupting the cervical vasculature.
5. **Hormone Replacement Therapy (HRT)**

Diagnostic Tests:

- **Transvaginal Ultrasound (TVUS):** An endometrial thickness >4 mm is suspicious and requires further evaluation.
- **Endometrial Biopsy:** Gold standard to detect endometrial hyperplasia or carcinoma.
- **Hysteroscopy**
- **Pap Smear:** Used to screen for cervical cancer

Management:

- **Polyps:** Hysteroscopic polypectomy is typically curative.

Endometrial Hyperplasia:

- **Without Atypia:** Managed conservatively with progestin therapy and regular monitoring.
- **With Atypia:** Hysterectomy is often recommended due to the risk of progression to carcinoma.

Malignancy:

- **Endometrial Cancer:** Early stages may be managed with hysterectomy and bilateral salpingo-oophorectomy, while advanced cases require radiation and chemotherapy.

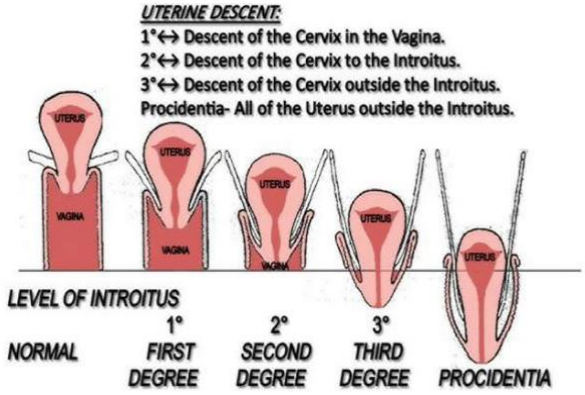
- **Cervical Cancer:** Managed based on the stage, ranging from surgery to chemoradiation for advanced disease.

Q 2)UTERINE PROLAPSE

Ans) Uterine prolapse, is a condition where the uterus descends from its normal anatomical position due to weakening of the pelvic support structures.

pelvic organs are supported by three primary mechanisms:

1. **Ligamentous Support:** The cardinal, uterosacral, and round ligaments
2. **Muscle Support:** The pelvic diaphragm, composed primarily of the levator ani muscle group
3. **Fascial Support:** Endopelvic fascia and connective tissue support the bladder, uterus, and rectum



Etiology

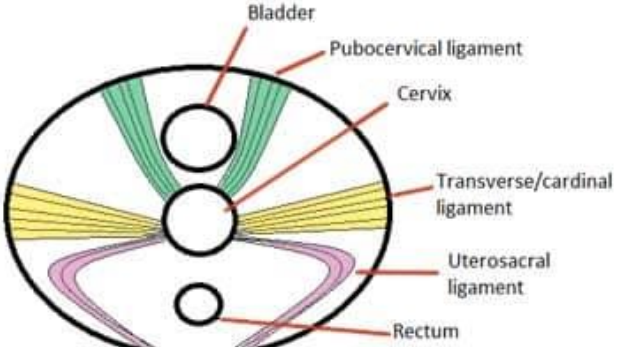
1. **Childbirth Trauma:** Vaginal delivery, especially with large babies, instrumental delivery, or prolonged labor.
2. **Aging and Menopause:** With aging, collagen and connective tissue weaken.
3. **Increased Intra-Abdominal Pressure:** Conditions like chronic cough, constipation, and obesity raise intra-abdominal pressure.

Clinical Presentation:

- Sensation of a mass or bulge in the vagina
- **Pelvic Discomfort**
- **Urinary Symptoms:** Frequency, urgency, incontinence, or retention due to associated cystocele
- **Bowel Symptoms:** Constipation, incomplete evacuation, or fecal incontinence associated with rectocele
- **Sexual Dysfunction:** Dyspareunia or difficulty with intercourse.

Diagnosis:

1. **Pelvic Examination:** A speculum and bimanual exam assess the extent of prolapse. The Valsalva maneuver may be used to evaluate prolapse under strain.
2. **Imaging:** Ultrasonography or MRI may be performed.



Management

Conservative Management:

- **Pelvic Floor Exercises:** Also known as Kegel exercises.
- **Pessary Use:** A vaginal pessary is inserted to provide support.
- **Hormone Replacement Therapy (HRT):** Local estrogen therapy is recommended for postmenopausal women with mild prolapse.

Surgical Management:

- **Vaginal Hysterectomy**
- **Uterine Suspension Procedures:** Procedures like sacrospinous fixation or uterosacral ligament suspension
- **Pelvic Floor Repair**

Q) PELVIC INFLAMMATORY DISEASE

Ans) Acute pelvic inflammatory disease (PID) is an infection of the upper female genital tract, including the uterus, fallopian tubes, and ovaries, often leading to inflammation of the surrounding pelvic structures.

Etiology and Pathogenesis:

1. **Sexually Transmitted Pathogens:** *Neisseria gonorrhoeae* and *Chlamydia trachomatis* are the most common pathogens
2. **Endogenous Flora:** Other bacteria such as *Escherichia coli*, *Gardnerella vaginalis*, and anaerobes (e.g., *Bacteroides* species)
3. **Iatrogenic Causes:** Medical procedures like endometrial biopsy, hysteroscopy, or insertion of an intrauterine device (IUD).

Risk Factors:

- Unprotected sexual intercourse with multiple partners
- History of previous PID or sexually transmitted infections (STIs)
- Recent IUD insertion or pelvic procedures
- Young age and early sexual activity

Clinical Presentation

1. **Lower Abdominal Pain:** The most frequent symptom.
2. **Abnormal Vaginal Discharge:** Often purulent or foul-smelling.
3. **Fever and Malaise:** Systemic signs of infection.
4. **Dyspareunia and Dysuria**
5. **Menstrual Irregularities**

Examination Findings:

Pelvic Tenderness: particularly in the adnexal regions.

Cervical Motion Tenderness (CMT): A hallmark sign in PID

Diagnosis:

1. **Laboratory Tests:**
    - **Complete Blood Count (CBC):** Leucocytosis may be present in acute PID.
    - **C-Reactive Protein (CRP) and Erythrocyte Sedimentation Rate (ESR):** Elevated levels indicate inflammation.
    - **Microbiological Tests:** Cervical swabs for *Neisseria gonorrhoeae* and *Chlamydia trachomatis* should be obtained for confirmation.
2. **Imaging Studies:**
    - **Ultrasound:** Pelvic ultrasound is useful for detecting complications such as tubo-ovarian abscess (TOA)
    - **Laparoscopy** is the gold standard for diagnosing PID, as it allows direct visualization of inflamed or pus-filled tubes.

Management:

1. **Antibiotic Therapy:** Broad-spectrum antibiotics are used to cover both aerobic and anaerobic bacteria.
    - For mild-to-moderate cases, a combination of ceftriaxone, doxycycline and metronidazole is often recommended.
    - Severe cases require intravenous antibiotics.
2. **Supportive Care:**
    - **Pain Management:** Analgesics are provided to manage abdominal pain.
    - **Hydration and Bed Rest**.
3. **Surgical Management:** Surgery is generally reserved for complications, such as a ruptured tubo-ovarian abscess or cases unresponsive to antibiotics.

Complications

1. **Infertility:** Tubal scarring and adhesions leading to infertility.
2. **Ectopic Pregnancy:** Damaged fallopian tubes increase the risk of ectopic pregnancy
3. **Chronic Pelvic Pain:** Persistent inflammation can result in chronic pain due to pelvic adhesions.

4. **Tubo-Ovarian Abscess (TOA):** A localized collection of pus in the fallopian tubes and ovaries, requiring immediate intervention to prevent rupture and peritonitis.

Q) CARCINOMA CERVIX

Ans) Etiology: The two most common oncogenic HPV types, HPV-16 and HPV-18, are implicated in approximately 70% of cervical cancer cases. Other contributing risk factors include:

1. Sexual Activity: Early sexual activity and multiple sexual partners increase the risk of HPV exposure.
2. Smoking: Smoking is associated with increased risk due to the presence of carcinogens that affect the cervix.
3. Immunosuppression: Conditions like HIV/AIDS weaken the immune system, making it harder to clear HPV infections.
4. Socioeconomic Status: Limited access to healthcare, including screening and vaccination, increases the risk in lower socioeconomic groups**.**

Pathology and Types of Cervical Cancer: Cervical cancer primarily develops from the squamocolumnar junction (transformation zone) of the cervix, where squamous metaplasia commonly occurs.

1. Squamous Cell Carcinoma (SCC): Constituting about 80–90% of cervical cancers, SCC arises from the squamous epithelium of the cervix.
2. Adenocarcinoma: This type originates from the glandular epithelium and accounts for about 10–20% of cervical cancers.

Clinical Presentation

1. Early Stage: Often asymptomatic; early cervical cancer is frequently detected through routine screening.
2. Advanced Stage:
    - Abnormal Vaginal Bleeding: This includes post-coital bleeding, intermenstrual bleeding, or postmenopausal bleeding.
    - Foul-Smelling Vaginal Discharge
    - Pelvic Pain
    - Urinary or Rectal Symptoms: Frequency, dysuria, haematuria, or tenesmus

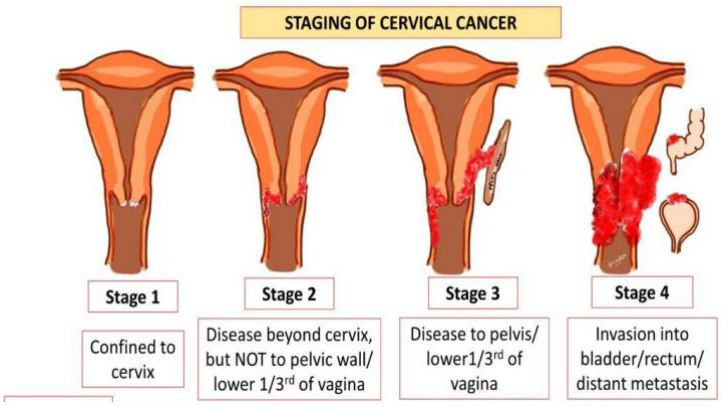
Signs may include a friable or ulcerated lesion on the cervix upon physical examination.

Diagnosis:

1. **Screening Tests:**

- Pap Smear (Cytology)
- HPV Testing

2. Colposcopy: Acetic acid or Lugol's iodine may be used to visualize areas of dysplasia.
3. Biopsy: A cervical biopsy confirms the diagnosis and histological type of cancer.
4. Imaging Studies:
    - MRI and CT scans
    - PET Scans



Staging of Cervical Cancer: According to the FIGO system

- Stage I: Limited to the cervix.
- Stage II: Extends beyond the cervix but not to the pelvic wall or lower third of the vagina.
- Stage III: Extends to the pelvic wall or lower third of the vagina or causes hydronephrosis.
- Stage IV: Spread to adjacent organs (e.g., bladder or rectum) or distant metastasis.

Management of Cervical Cancer:

1. Early-Stage Management:
    - Surgical Options:
        - Conization: For microinvasive cancers (Stage IA1), conization can be curative and fertility-preserving.
        - Hysterectomy: Radical hysterectomy with lymphadenectomy is often performed in early-stage cancer (Stage IA2 to IB1) without distant spread.
2. Locally Advanced Disease (Stage IB2 to IVA):
    - Radiotherapy: is a mainstay treatment for locally advanced cancer.
    - Concurrent Chemoradiation
3. Advanced Stage or Metastatic Disease (Stage IVB):
    - Palliative Care: For advanced disease
    - Pain Management and Supportive Care

Prevention:

HPV Vaccination: Vaccines targeting HPV-16, HPV-18, and other high-risk strains have proven effective in preventing cervical cancer.