UNIT 8
Reproductive System
Pathological Conditions
Female Reproductive System
CANDIDIASIS

- Vaginal fungal infection caused by *Candida albicans*; characterized by a curdy or cheeselike discharge and extreme itching.
CERVICITIS

- Inflammation of the uterine cervix.
  - Cervicitis is usually the result of infection or a sexually transmitted disease. It may also become chronic, because the cervical lining is not renewed each month as is the uterine lining during menstruation.
ECTOPIC PREGNANCY

- Implantation of the fertilized ovum outside of the uterine cavity.
  - Ectopic pregnancy occurs in approximately 1% of pregnancies, most commonly in the oviducts (tubal pregnancy). Some types of ectopic pregnancy include ovarian, interstitial, and isthmic.
ENDOMETRIOSIS

- Presence of endometrial tissue outside (ectopic) the uterine cavity, such as the pelvis or abdomen.
FIBROID

- Benign neoplasm in the uterus that is composed largely of fibrous tissue; also called leiomyoma.
  - Uterine fibroids are the most common tumors in women. If fibroids grow too large and cause symptoms such as pelvic pain or menorrhagia, hysterectomy may be indicated.
LEUKORRHEA

- White discharge from the vagina.
  - A greater than usual amount of leukorrhea is normal in pregnancy, and a decrease is to be expected after delivery, during lactation, and after menopause. Leukorrhea is the most common reason women seek gynecological care.

FIGURE 2. Microscopy of bacterial vaginosis and leukorrhea
OLIGOMENORRHEA

- Scanty or infrequent menstrual flow.
PREGNANCY-INDUCED HYPERTENSION (PIH)

- Potentially life-threatening disorder that usually develops after the 20th week of pregnancy and is characterized by edema and proteinuria.
  - PIH may occur in nonconvulsive or convulsive forms.
PREECLAMPSIA

- Nonconvulsive form of PIH.
  - *If left untreated, preeclampsia may progress to eclampsia. Treatment includes bed rest and blood pressure monitoring.*
ECLAMPSIA

- Convulsive form of PIH.
  - Treatment for eclampsia includes bed rest, blood pressure monitoring, and antiseizure drugs.
PYOSALPINX

- Pus in the fallopian tube.
RETROVERSION

- Turning, or state of being turned back, especially an entire organ being tipped from its normal position (such as the uterus).
  - Uterine retroversion is measured as first-, second-, or third-degree, depending on the angle of tilt in relationship to the vagina.
STERILITY

- Inability of a woman to become pregnant or for a man to impregnate a woman.
TOXIC SHOCK SYNDROME (TSS)

- Rare and sometimes fatal staphylococcus infection that generally occurs in menstruating women, most of whom use vaginal tampons for menstrual protection.
  - In TSS, the normally harmless vaginal bacterium Staphylococcus aureus multiplies in the old blood in the tampon and releases toxins. The tampon itself creates small tears in the vaginal wall that allow the toxins to enter the blood.
TRICHOMONIASIS

- Protozoal infestation of the vagina, urethra, or prostate.

*Trichomonas vaginalis* trophozoite
Male Reproductive System
ANORCHISM

- Congenital absence of one or both testes; also called anorchia.
Balanitis

- Inflammation of the skin covering the glans penis.
  - Balanitis is caused by irritation and invasion of microorganisms. It is commonly associated with inadequate hygiene of the prepuce and phimosis.
CRYPTORCHIDISM

- Failure of one or both testicles to descend into the scrotum.
  - Cryptorchidism is associated with a high risk of sterility, causing a low sperm count and male infertility. If testes do not descend on their own at an early age, orchiopexy is performed to bring the testicles into the scrotum.
EPISPADIAS

- Congenital defect in which the urethra opens on upper side of the penis near the glans penis instead of the tip.
HYPOSPADIAS

- Congenital defect in which the male urethra opens on underside of the penis instead of the tip.
IMPOTENCE

- Inability of a man to achieve or maintain a penile erection; commonly called erectile dysfunction.
Stenosis or narrowness of the preputial orifice so that the foreskin cannot be pushed back over the glans penis.
Sexually Transmitted Diseases
SEXUALLY TRANSMITTED DISEASE (STD)

- Any disease that may be acquired as a result of sexual intercourse or other intimate contact with an infected individual and affects the male and female reproductive systems; also called venereal disease.
CHLAMYDIA

- STD caused by infection with the bacterium Chlamydia trachomatis.
  - Chlamydia is the most prevalent and among the most damaging of all STDs. In women, chlamydial infections cause cervicitis with a mucopurulent discharge and an alarming increase in pelvic infections. In men, chlamydial infections cause urethritis with a whitish discharge from the penis.
GENITAL WARTS

- Wart(s) in the genitalia caused by human papillomavirus (HPV).
  - In women, genital warts may be associated with cervical cancer.
GONORRHEA

- Contagious bacterial infection that most commonly affects the genitourinary tract and, occasionally, the pharynx or rectum.
  - Gonorrheal infection results from contact with an infected person or with secretions containing the causative organism *Neisseria gonorrhoeae*. In men, symptoms include dysuria and a greenish yellow discharge from the urethra. In women, the chief symptom is a vaginal greenish yellow discharge. Gonorrhea can be transmitted to the fetus during delivery.
HERPES GENITALIS

- Infection in females and males of the genital and anorectal skin and mucosa with herpes simplex virus type 2.
  - This viral infection may be transmitted to the fetus during delivery and may be fatal.
SYPHILIS

- Infectious, chronic STD characterized by lesions that change to a chancre and may involve any organ or tissue.
  - Syphilis usually exhibits cutaneous manifestations and relapses are common without treatment. It may exist without symptoms for years and can be transmitted from mother to fetus.
Diagnostic Procedures

Female
AMNIOCENTESIS

- Obstetric procedure that involves surgical puncture of the amniotic sac under ultrasound guidance to remove amniotic fluid.
  - In amniocentesis, cells of the fetus found in the fluid are cultured and studied chemically and cytologically to detect genetic abnormalities, biochemical disorders, and maternal-fetal blood incompatibility.
COLPOSCOPY

- Examination of the vagina and cervix with an optical magnifying instrument (colposcope).
  - Colposcopy is commonly performed after a Papanicolaou test to obtain biopsy specimens of the cervix.
HYSTEROSALPINGOGRAPHY

- Radiography of the uterus and oviducts after injection of a contrast medium.
LAPAROSCOPY

- Visual examination of the abdominal cavity with a laparoscope through one or more small incisions in the abdominal wall, usually at the umbilicus.

  Laparoscopy is used for inspection of the ovaries and fallopian tubes, diagnosis of endometriosis, destruction of uterine leiomyomas, myomectomy, and gynecologic sterilization.
MAMMOGRAPHY

- Radiography of breast; used to diagnose benign and malignant tumors.
PAPANICOLAOU (PAP) TEST

- Microscopic analysis of cells taken from the cervix and vagina to detect the presence of carcinoma.
- Cells are obtained for a Pap test via insertion of a vaginal speculum and the use of a swab to scrape a small tissue sample from the cervix and vagina.
ULTRASONOGRAPHY (US)

- Imaging technique that uses high-frequency sound waves (ultrasound) that bounce off body tissues and are recorded to produce an image of an internal organ or tissue.

  - Pelvic US is used to evaluate the female reproductive organs and the fetus during pregnancy. Transvaginal US places the sound probe in the vagina instead of across the pelvis or abdomen, producing a sharper examination of normal and pathologic structures within the pelvis.
ULTRASONOGRAPHY (US)
Diagnostic Procedures

Male
DIGITAL RECTAL EXAMINATION (DRE)

- Examination of the prostate gland by finger palpation through the anal canal and the rectum.
  - DRE is usually performed during physical examination to detect prostate enlargement. It is also used to check for problems with organs or other structures in the pelvis and lower abdomen.
PROSTATE-SPECIFIC ANTIGEN (PSA) TEST

- Blood test to screen for prostate cancer.
  - Elevated levels of PSA are associated with prostate enlargement and cancer.
Medical and Surgical Procedures

Female
CERCLAGE

- Obstetric procedure in which a nonabsorbable suture is used for holding the cervix closed to prevent spontaneous abortion in a woman who has an incompetent cervix.
DILATION AND CURETTAGE (D&C)

- Surgical procedure that widens the cervical canal of the uterus (dilation) so that the endometrium of the uterus can be scraped (curettage).
  - D&C is performed to stop prolonged or heavy uterine bleeding, diagnose uterine abnormalities, and obtain tissue for microscopic examination. It is also performed to remove tumors, rule out carcinoma of the uterus, removed retained placental fragments after delivery or after an incomplete abortion, and determine the cause of infertility.
DILATION AND CURETTAGE (D&C)
HYSTEROSALPINGO-OOPHORECTOMY

- Surgical removal of a uterus, a fallopian tube, and an ovary.
LUMPECTOMY

- Excision of a small primary breast tumor (“lump”) and some of the normal tissue that surrounds it.
  - In lumpectomy, lymph nodes may also be removed because they are located within the breast tissue taken during surgery. All tissue removed from the breast is biopsied to determine whether cancer cells are present in the normal tissue surrounding the tumor. Lumpectomy is the most common form of breast cancer surgery today.
**MASTECTOMY**

- Complete or partial excision of one or both breasts, most commonly performed to remove a malignant tumor.
  - *Mastectomy may be simple, radical, or modified depending on the extent of the malignancy and amount of breast tissue excised.*
TOTAL MASTECTOMY

- Excision of an entire breast, nipple, areola, and the involved overlying skin; also called *simple mastectomy*.
  
  - *In total mastectomy, lymph nodes are removed only if they are included in the breast tissue being removed.*
MODIFIED RADICAL MASTECTOMY

- Excision of an entire breast, including lymph nodes in the underarm (axillary dissection).

  - Most women who have mastectomies today have modified radical mastectomies.
RADICAL MASTECTOMY

- Excision of an entire breast, all underarm lymph nodes, and chest wall muscles under the breast.
RECONSTRUCTIVE BREAST SURGERY

- Reconstruction of a breast that has been removed due to cancer or other disease.
  - Reconstruction is commonly possible immediately following mastectomy so the patient awakens from anesthesia with a breast mound already in place.
TISSUE (SKIN) EXPANSION

- Common breast reconstruction technique in which a balloon expander is inserted beneath the skin and chest muscle, saline solution is gradually injected to increase size, and the expander is then replaced with a more permanent implant.
TRANSVERSE RECTUS ABDOMINIS MUSCLE (TRAM) FLAP

- Surgical creation of a skin flap (using skin and fat from the lower half of the abdomen), which is passed under the skin to the breast area, shaped into a natural-looking breast, and sutured into place.
  - The TRAM flap procedure is one of the most popular reconstruction options.
TUBAL LIGATION

- Sterilization procedure that involves blocking both fallopian tubes by cutting or burning them and tying them off.
Medical and Surgical Procedures

Male
CIRCUMCISION

- Surgical removal of the foreskin or prepuce of the penis, usually performed on the male as an infant.
Surgical procedure to relieve obstruction caused by benign prostatic hyperplasia (excessive overgrowth of normal tissue) by insertion of a resectoscope into the penis and through the urethra to “chip away” at prostatic tissue and flush out chips (using an irrigation solution).

- The pieces of prostatic tissue obtained through TURP are sent to the laboratory to be analyzed for possible evidence of CA. Although TURP relieves the obstruction, overgrowth of tissue may recur over several years. Lasers may also be used to destroy prostatic tissue and relieve obstruction.
TRANSURETHRAL RESECTION OF THE PROSTATE (TURP)
GONADOTROPIN

- Hormonal preparation used to increase sperm count in infertility cases.