THE REPRODUCTIVE SYSTEM MODULE

Phase II

Study Guide

2009
كلمة ترحيبية

أخي / أختي الطالبة:

السلام عليكم ورحمة الله وبركاته

يسعدني أن أرحب بكم في هذا الجهاز التناسلي، أتمنى لكم كل توفيق وسعادة وأتمنى منكم أن لا تترددوا بالسؤال عن أي معضلة تواجهونها سواء كانت علمية أو تنظيمية، أدعوا الله عز وجل أن يسدد خطانا جميعا ولكلكم تحياتي وتقديري.

د/ عبد المعين الأغا
رئيس فريق عمل الجهاز التناسلي

WELCOME MESSAGE

Dear all students

Al-salaam alikum,

It is my pleasure to welcome you all for this reproductive module, wishing you all the best. Please don't hesitate to contact me for any inconvenience or any scientific queries on my e-mail. Allah prayers for all of us to make our steps in the right path.

Sincerely all,

Dr. Abdulmoein Al-Agha,

Chairman, Reproductive System Module,

Abdulmoein@dr-agha.com
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# Module Members Contacts

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<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
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<td><a href="mailto:aboassil@yahoo.com">aboassil@yahoo.com</a></td>
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OUTCOMES OF THE MEDICAL UNDERGRADUATE CURRICULUM

1) Knowledge

**Graduate should have sufficient knowledge and understanding of:**

a. The normal structure, function and development of the human body & interaction between body & mind.
b. The normal pregnancy and child birth, the principles of antenatal & postnatal care.
c. The etiology, pathogenesis, clinical presentation, natural history & prognosis of common physical and mental disease, particular those which pose acute danger to function, life or the community.
d. Common diagnostic tests and procedures, their uses, limitations and costs
e. The principles of health education, disease prevention, rehabilitation and the care of the suffering and dying.
f. The principles and ethics related to health care and the Islamic and legal responsibilities of the medical profession.

2) Skills

**Graduate should acquire the skills of:**

a. Take a tactful, accurate and organized medical history.
b. Perform a gentle & accurate physical and mental examination.
c. Integrate history & physical examination to reach a provisional diagnosis of differential diagnosis.
d. Select the most appropriate & cost effective diagnostic procedures.
e. Formulate a management plan.
f. Counsel patients & families clearly regarding diagnostic and therapeutic procedures before eliciting consent.
g. Perform common life-saving procedures.
h. Use information resources to obtain further knowledge and interpret medical evidence critically and scientifically
i. Communicate clearly & considerately with other health professionals
Attitude

Graduate should have the attitude of:

a. Respect for every human being & abide by relevant Islamic ethics.
b. A desire to ease pain and suffering.
c. Willingness to work in a team with other health professionals.
d. Responsibility to remain a life-long learner & maintain the highest ethical & professional standards.
e. Referring patients to other health professional when needed.
f. A realization that it is not always in the interest of patients to pursue every diagnostic or therapeutic possibility.
This phase will include knowledge, skills and attitudes, particularly attitudes toward the learning process.

### Phase II

#### Third Year

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# Reproductive Module Specification

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## A Module Identification and General Information

1. **Module title and code:** Reproductive System Module  
   **SYS 326**

2. **Credit hours** | **5 H** | **credit point** | **70**

3. **Module is offered in the MB BS program**

4. **Name of faculty member responsible for the module**  
   **Dr. Abdulmoein Al-Agha**  
   **Dr. Layla Abdullah**

5. **Level/year at which this module is offered**  
   **3rd year – 6th semester**

6. **Pre-requisites for this module:**  
   Foundation course- Cell and Tissues- General Pathology- General Anatomy- Biochemical Basis of Medicine

7. **Co-requisites for this Module**  
   **No co-requisite courses crucial**

8. **Location : main campus**
The following icons have been used to help you identify the various experiences you will be exposed to.

- ![Learning objectives icon]
  Learning objectives

- ![Content of the lecture icon]
  Content of the lecture

- ![Independent learning from textbooks icon]
  Independent learning from textbooks

- ![Independent learning from the CD-ROM icon]
  Independent learning from the CD-ROM.
  The computer cluster is in the 2nd floor of the medical library, building No. 7.

- ![Independent learning from the Internet icon]
  Independent learning from the Internet
Problem-Based Learning

Self-Assessment (the answer to self-assessment exercises will be discussed in tutorial sessions)

The main concepts
Topic Outlines

Department: Physiology

Lecturer: Dr. Khidir Abdel Galil, Dr. Azra Karmani

At the end of the lecture you should be able to

1. Illustrate the concept of human reproduction.
2. Describe the functions of the gonads.
3. Describe sex differentiation.
   * Gonadal Sex
   * Genetic Sex.
4. Define abnormalities in sexual development.

1. An overview for human reproduction.
2. Function of the gonads in the male & female:
4. Abnormalities of sexual development: a) Genetic abnormalities: b) Hormonal abnormalities:


Independent learning from the CD-ROM.
The computer cluster is in the 2nd floor of the Medical Library, building No. 13.

1- Mention the process of sex differentiation?
## Lecture 2: Normal and Abnormal Embryology of the male reproductive tract

**Department: Anatomy**

**Lecturer: Prof. Saed Zaghloul, Dr. Fathia Ahmed**

### At the end of the lecture you should be able to:

1. Describe the embryological origin of the male reproductive tract (the primitive sex duct, the genital duct, and the external genitalia)
2. Describe the specific stages of the development of the males gonads, genital tract and external genitalia
3. Explain the influence of the chromosome complement of the primordial germ cell on sex differentiation
4. Explain the influence of the male sex glands and its hormones on further sex differentiation
5. Define the male sex abnormalities as reflected in the duct system and external genitalia.

### Points to consider:

1. The urogenital system and its divisions
2. The key to sexual dimorphism including the testis determining factor gene
3. Different stages of the development of both sex genital system including the gonads genital tract and external genitalia.
4. Stages of the development of testis, epididymis, seminal vesicles, vas deferens and ejaculatory duct
5. Hormonal control of the development of the male genital tract
6. Abnormalities associated with improper development of the male genital tract.

---

1. Langman’s Medical Embryology, Thomas W. Sadler, 2006, 10th edition, Lippincot Williams & Wilkins.
Prostatic utricle in male is the remains of:

1- Mesonephric ducts
2- Paramesonephric ducts
3- Prostatic urethra
4- Mesonephric tubule
Lecture 3: Normal and Abnormal Embryology of the female reproductive tract

Department: Anatomy

Lecturer: Prof. Saed Zaghloul, Dr. Fathia Ahmed

At the end of the lecture you should be able to:

1) Describe the embryological origin of the female reproductive tract.
2) Describe the specifics stages of the development of the females' gonads, genital tract and external genitalia.
3) Explain the influence of the chromosome of the primordial germ cell on female sex differentiation.
4) Explain the influence of the female sex glands and its hormones on further female sex differentiation.
5) Define the female sex abnormalities as reflected in the duct system and external genitalia.

1) The genital ridge (gonadal ridge) and differentiation of the female genital tract.
2) Influence of the primordial germ cells on the differentiation of the female reproductive system.
3) Stages of the development of ovaries, uterine tubes, uterus and vagina.
4) Hormonal control of the development of the female genital tract.
5) Abnormalities associated with improper development of the female genital tract.

1) Langman’s Medical Embryology, Thomas W. Sadler, 2006, 10th edition, Lippincot Williams & Wilkins.

About development of ovary, the following are true, except:

1- It develops medial to mesonephros.
2- Primitive germ cells come from wall of yolk sac
3- Follicular cells come from cells of celomic epithelium
4- Thickening of tunica albuginea occurs
Lecture 4: Gross Anatomy of the female reproductive Tract

Department: Anatomy

Lecturer: Dr. Gamal Said, Prof. Amira

At the end of the lecture you should be able to:

1) Describe the gross anatomy of the normal female pelvis.
2) Describe the structures (surface anatomy) of the female external genitalia.
3) Describe the gross anatomy of the female pelvic organs including: the ovaries, uterine tubes, the uterus, the broad ligament and the vagina.
4) Identify the uterosesical pouch and the recto uterine pouch (Pouch of Douglas).
5) Describe the blood supply, the lymphatic drainage and the nerve supply of the female reproductive system.
6) Identify the factors supporting the female pelvic organs especially the uterus and vagina.

1) The normal female pelvis including the features characterizing the female pelvis from that in males.
2) True and false pelvis including the pelvic inlet and outlet.
3) Surface anatomy of the female perineum (external genitalia).
4) Gross anatomy of the ovaries, uterine tubes, uterus, uterosesical pouch, recto uterine pouch and vagina.
5) The broad ligament and its contents.
6) Blood supply, venous drainage, lymphatic drainage and nerve supply of the female reproductive tract.
7) The pelvic floor and its contents including levator ani muscle.
8) The ligaments supporting the uterus in its normal position.


1- What are the supporting factors of the uterus?

2- Mention the blood supply and lymphatic drainage of the ovary?
Lecture 5: Gross Anatomy of the Male reproductive Tract

Department: Anatomy

Lecturer: Prof. Amira, Dr. Gamal Said

At the end of the lecture you should be able to:

1) Describe the gross anatomy and external features of the male external genitalia including: the penis, scrotum, testis and epididymis.

2) Describe the gross anatomy and the anatomotical relations of the male pelvic organs including: the prostate, vas deferens, seminal vesicles and ejaculatory duct.

3) Describe the blood supply, lymphatic drainage and nerve supply of the male reproductive system (external and internal sex organs).

4) Illustrate the endocrinal component of the male sex organs.

1) The surface anatomy and external features of the male perineum.

2) The structure and anatomical relations of the male pelvic organs.

3) Blood supply venous drainage, lymphatic drainage and nerve supply of the male reproductive tract (both internal and external sex organs).

4) Androgen secretion and its pituitary control.


1-Mention the blood supply and lymphatic drainage of the prostate?
Lecture 6 & 7: Histology of Normal Male reproductive Tract

-Department: Anatomy

Lecturer: Dr. Gamal Said, Dr. Hanan

At the end of the lecture you should be able to:

1) Describe the normal histology of the testis and seminiferous tubules including the interstitial tissue
2) Describe the normal structure of the spermatozoa
3) Describe the normal histology of the male accessory glands and excretory ducts including: the prostate, the epididymis, the vas deferens, seminal vesicles and the ejaculatory duct
4) Describe the normal histology of the penis and penile urethra
5) Illustrate the hormonal control of the male reproductive tract

1- Draw a labeled diagram for the histological picture of testis at power 400
Lecture 8 & 17: Histology of Normal female reproductive Tract

Department: Anatomy

Lecturer: Dr. Gamal Said, Dr. Hanan

At the end of the lecture you should be able to:

1) Describe the normal histology of the ovary including the ovarian follicle
2) Describe the normal histology of different stages of the ovarian follicles
3) Describe the normal histology of the uterine tubes, uterus, cervix and vagina
4) Illustrate the hormonal control of the female reproductive tract

1) Histology of the ovary.
2) Histology of the uterine tubes
3) Histology of the uterus and specifically the cervix
4) Histology of the vagina
5) Effects of hormones on the ovary


1- Mention the different hormones that affect function of the ovary and summarize their mechanism of action on the ovary?

| REPRODUCTIVE SYSTEM | Page 25 |
Lectures 9-10: Testicular steroidogenesis and its endocrine control

Department: Clinical Biochemistry

Lecturer: Prof. Adil Abdel Rafee, Dr Fayza F. Al Fayez

After this lecture student should be able to:

1- Identify the type of hormones involved in steroidogenesis and their origin.
2- Illustrate the pathway of formation of male sex hormones and factors controlling them.
3- Discuss mode of action of hormones.
4- Explain the pathological consequences due to biosynthetic defects.

- Testosterone and androgens:
  - Origin.
  - Biosynthesis.
  - Mode of transport.
  - Mode of action.
  - Control of steroidogenesis.


1- Describe the mode of action of testosterone?
Lectures 11-12: Female sex hormones

Department: Clinical Biochemistry

Lecturer: Prof. Adil Abdel Rafee, Dr Fayza F. Al Fayez

After this lecture student should be able to:

1. Define female sex hormones and their origin.
2. Describe the pathway of formation of female sex hormones and factors controlling it.
3. Relate the pathological consequences to biosynthetic and transport defects.
4. Demonstrate how to assess gonadal function.

- Estradiol and progesterone:
  - Origin.
  - Biosynthesis.
  - Mode of action.
  - Assessment of female sex hormones disorders.


1- Describe the mode of action of estradiol?
Lecture 13: The Puberty Onset & the Major Physiological Changes

Department: Physiology

Lecturer: Dr. Atef Abood, Dr. Azra Karmani

After this lecture student should be able to:

1. Define puberty.
2. Describe the hormonal changes during puberty.
3. Describe somatic growth & major physiological changes accompanying puberty in both sexes.
4. Describe the hormonal control of puberty onset.

1. Hormonal changes during puberty & their effects on both sexes.
2. Differentiation between puberty & adolescence.
3. Major physiological changes at puberty in both sexes.
4. Development of reproduction capacity in both sexes.
5. Hormonal control of onset of puberty.
6. Adrenal cortex (adrenarche ), social, psychological, nutritional & environmental factors.


Independent learning from the CD-ROM.
The computer cluster is in the 2nd floor of the Medical Library, building No. 13.

1- What are the physiological differences between puberty & adolescence periods
Lecture 14: The Menstrual Cycle

Department: Physiology

Lecturer: Dr. Atef Abood, Dr. Azra Karmani

After this lecture student should be able to:

1. Describe the functions of the various ovarian hormones.
2. Describe the various stages of the menstrual cycle.
3. Describe the physiological control of ovarian hormones.

1. Effect of progesterone, relaxin, inhibin & others on the body & reproductive tract of the Female.
2. Theme of the endocrine control in the female.
3. Various stages of the menstrual cycle.
4. Factors that control the ovarian cycle.


Independent learning from the CD-ROM.
The computer cluster is in the 2nd floor of the Medical Library, building No. 13.

What are the factors that control ovarian cycle?
Lecture 15: The physiology of Pregnancy

Department: Physiology

Lecturer: Dr. Khidir Abdel Galil, Dr. Azra Karmani

After this lecture student should be able to:

1. Describe the mode of sperm transport up the female genital tract to the mid-oviduct.
2. Explain the physiological changes that occur in the sperm before the penetration of the ovum.
3. Explain the endocrinological changes during pregnancy.
4. Define other placental hormones & the activity of other endocrine glands.

1. The effects of oxytocin, prostaglandins & chemotactic factors on mode of sperm transport up the female genital tract to the site of fertilizing in the mid-oviduct.

2. The physiological changes that occur in the sperm before penetration of the ovum.

3. The endocrinological changes during pregnancy.


Independent learning from the CD-ROM.
The computer cluster is in the 2nd floor of the Medical Library, building No. 13.
Independent learning from the Internet.

1- Mention the major endocrinological changes during pregnancy?
Lecture 16: Embryonic Period

Department: Anatomy

Lecturer: Dr. Hamid Saleh, Dr. Fathia Ahmed

At the end of the lecture you should be able to:

1) Define the embryonic period

2) Illustrate the main stages of normal embryonic development from implantation till the establishment of the main organ systems.

3) Describe the major weekly changes of the embryo from the implantation till the formation of major organ systems  (Till the end of week 8).

4) Define the derivatives and differentiation of the three main germ layers (ectoderm, mesoderm and endoderm).

1) Definition of Embryonic period.

2) Main stages of development from implantation till the end of week 8.

3) The major changes and structural constituents of the main stages of embryonic development.

4) Derivatives of ectodermal, mesodermal and endodermal germ layers and embryonic tissue differentiation.

1) Langman’s Medical Embryology, Thomas W. Sadler, 2006, 10th edition, Lippincot Williams & Wilkins.

1- What are the derivatives of the mesoderm?
Lecture 18: Fetus & Placenta

Department: Anatomy

Lecturer: Dr. Hamid Saleh, Dr. Fathia Ahmed

At the end of the lecture you should be able to:

1) Define the fetal period.
2) Describe the monthly developments changes (normal fetal growth) during the fetal period (3rd month to birth).
3) Describe the abnormal fetal growth.
4) Define the length of the normal pregnancy.
5) Identify the normal placenta and its components.
6) Describe the placental changes at the end of pregnancy.
7) Describe the role of endocrinial activity of placenta in maintaining normal pregnancy.
8) Identify the normal umbilical cord and its contents.
9) Describe the fetal membranes.

1) Definition of fetal period.
2) Normal monthly changes during the fetal period.
3) Normal length of pregnancy and problems associated with newly born baby (premature baby).
4) Abnormal fetal growth such as intrauterine growth retardation (IUGR) and small for gestational age (SGA).
5) Normal placenta and its components.
6) The role placental endocrine functions in maintaining normal pregnancy.
7) Normal umbilical cord and its contents.
8) Normal changed of placenta at the end of pregnancy
9) Fetal membranes and the amniotic fluid.

1) Langman’s Medical Embryology, Thomas W. Sadler, 2006, 10th edition, Lippincot Williams & Wilkins..

1- Describe the formation of the placenta.
Lecture 19: The Maternal Response To Pregnancy

Department: Physiology

Lecturer: Dr. Khidir Abdel Galil, Dr. Azra Karmani

After this lecture student should be able to:

1. Define the changes that occur in the maternal physiology.
2. Define the changes in the maternal weight gain.
3. Describe the cardiovascular changes.
4. Describe the respiratory changes.
5. Describe the changes in the gastrointestinal tract.
6. Describe the changes in the renal function

1. Changes occur in the maternal physiology in order to ensure the maternal well being & efficient fetal supply lines.
2. Changes in the maternal weight gain.
3. Cardiovascular changes in maternal physiology.
4. Respiratory changes in maternal physiology.
5. Changes in the GIT in maternal physiology.
6. Changes in renal function in maternal physiology.
7. Explanation of the above changes on the light of hormonal changes during pregnancy


Independent learning from the CD-ROM.
The computer cluster is in the 2nd floor of the Medical Library, building No. 13.
1- Describe cardiovascular changes in maternal physiology on the light of hormonal changes during pregnancy.
Lecture 20: The Physiology of Parturition

**Department: Physiology**

**Lecturer**  Dr. Khidir Abdel Galil, Dr. Azra Karmani

After this lecture student should be able to:

1. Define the effects of relaxin hormone on the pelvis and the cervix during the last few days before parturition.
2. Interpret the hormonal interaction between estrogen and oxytocin receptors in the uterus.
3. Describe the positive feedback loop initiated between oxytocin hormone & cervical dilation up to delivery of the fetus.
4. Define other factors contributing to labor that help during delivery of the fetus.

1. Role of relaxin hormone on the genital tract, pelvis & cervix few days before labor.
2. Relationship between estrogen release and the number of oxytocin receptors in the myometrium & decidua which increase to about 100 folds; in addition to increased sensitivity of myometrium to Oxytocin.
3. Positive feedback loop initiated at the start of labor between uterine contraction, cervical dilation & the release of more Oxytocin & therefore more uterine contraction & more cervical dilation that help to deliver the fetus.
4. Factors that contributes to labor.

Independent learning from the CD-ROM.
The computer cluster is in the 2nd floor of the Medical Library, building No. 13.

1. Hormones that help during parturition are:
   A. Progesterone.
   B. Oestrogens.
   C. Oxytocin.
   D. B & C.
Lecture 21: Biochemical tests for prenatal diagnosis

Department: Clinical Biochemistry

Lecturer: Prof. Adil Abdel Rafee, Dr Fayza F. Al Fayez

After this lecture student should be able to:

1- Explain maternal and fetal screening.
2- Discuss the genetic analysis of DNA.
3- Identify types of disease that can be screened by prenatal diagnosis.
4- Identify the metabolic changes found in the maternal blood indicating inherited metabolic defects.

| 1- Fetal DNA analysis in maternal circulation in the detection of genetic diseases. |
| 2- The value of biochemical information in prenatal diagnosis: |
| ✓ AFP |
| ✓ UE |
| ✓ Free β hCG (Urine / Semen) |
| ✓ Inhibin |
| ✓ Investigation of Neural tube defects. |
| ✓ Calculation of risk for Down’s syndrome |
3- Abnormal metabolic changes in maternal / fetal sampling in relation to inherited genetic disorders.


1- What is the role of fetal DNA analysis in maternal circulation in the detection of genetic diseases?
Lecture 22: Radiology of the Reproductive System

Department: Radiology

Lecturer: Dr. Naushad Ahamed, Dr. Samar Fatheddin

After this lecture student should be able to:

- Define the indications for the different imaging modalities in the investigation of the Reproductive System.
- Recognize different radiologic examinations of the reproductive system.
- Recognize major radiologic signs of disease of the reproductive system.

1- Significance of diagnostic imaging in the investigations of the reproductive system of both males and females.

2- Role of ultrasound in pregnancy.

3- Role of ultrasound in the non-pregnant females.

4- Role of ultrasound in males.

5- Description of the Magnetic Resonance Imaging (MRI).

6- Role of MRI in the investigations of the reproductive system of both males and females.

7- Description of Hysterosalpingography and it role in the investigations of the female reproductive system.


1- Mention the role of ultrasound in the follow up of pregnancy?
Lecture 23: Drugs and pregnancy

Department : Pharmacology
Lecturer: Prof. M. Solaiman, Prof. A. Moneim, Prof. M. Hagras

After this lecture student should be able to:

1. Define teratogens,
2. Recognize teratogenic drugs and agents
3. Discuss the classification of drugs regarding their fetus toxicity and teratogenic effect.
4. Discuss the adverse effects of some special drugs on the mother and the fetus
5. Revise the risk & benefit before prescribing to a pregnant women

1- Factors affecting transfer of drugs to the fetus: Maternal factors; gestational age, Placental state, role of the fetus

2- Principles of Teratogens: Mechanism, factors such as gestational age, duration and route of administration

3- Classification of drugs regarding their safety during pregnancy (FDA classification)

4- Examples of adverse effects of some drugs on the fetus:
   a. destruction of cells / abortion
   b. Various grades of fetal malformation.
   c. intra-uterine growth retardation/restriction
   d. cerebral damage / neurological damage
   e. mental retardation
   f. death of the fetus

5- FDA Risk Categories?

✓ A- Studies on humans; no risk
✓ B- Animal studies-no risk; No human studies
✓ C- Either animal studies show adverse effect and no human studies risk)
✓ D- Positive evidence of human risk; but benefits may outweigh risks
✓ X- Positive evidence of human risk; risk outweighs benefit and drug is contraindicated

1-Summarize most common indication of drugs during pregnancy.

2-Adverse effects of alcohol, smoking, narcotic drugs on the fetus & neonates.
After this lecture student should be able to:

1. Illustrate the features of placental and fetal circulation.
2. Describe metabolic & nutritional functions of the fetus.
3. Describe the respiratory functions of fetus.
4. Describe the excretory functions of the fetus.
5. Describe the protective functions of the fetus.

1. Mechanism of blood flow of the uterus which is parallel the metabolic activity of the myometrium and endometrium and undergoes cyclic fluctuations in cyclic women.

2. metabolic & nutritional functions:
   a) Proteins: the transfer of amino acids, albumins & some globulins across the placenta from maternal blood to fetus.
   b) Transfer of glucose and other carbohydrates via placenta to fetus.
   c) Transfer of degraded fats & phospholipids via placenta to fetus.
   d) Transfer of fat- soluble & water- soluble Vitamins to fetus.
   e) Transfer of minerals: Na, K, Mg, Fe, Ca & P

3. Respiratory function of the fetus:

4. Excretory function of the fetus.

5. Protective function of the placenta.

3) MCQs and EMQs, In human physiology, Ian C. Roddie, and William F.M. Wallace, 6th
1- Mention the functions of the placenta?
Lecture 25: The Menopause Changes Underlying Climacteric Symptoms

Department: Physiology

Lecturer Dr. Khidir Abdel Galil, Dr. Azra Karmani

After this lecture student should be able to:

1. Discuss irregularity of sexual cycles & failure of ovulation before ceasing (definition, age of onset).
2. Describe the causes of menopausal onset & its endocrine control. The relationship between levels of estrogen & gonadotropin (FSH & LH).
3. Define the local & systemic effects on the body of the female.

1. Definition of menopause & the age of onset.
2. Causes of menopause.
3. Local and systemic menopausal changes that occur in the body of the female.


Independent learning from the CD-ROM.
The computer cluster is in the 2nd floor of the Medical Library, building No. 13.

1- What are the systemic changes that occur in the body of the female during menopause?
Lecture 26: Biochemical investigations of infertility

**Department:** Clinical Biochemical

**Lecturer:** Prof. Adil Abdel Rafee, Dr. Fayza F. Al Fayez

After this lecture student should be able to:

1. Identify a scheme of investigations in male and female.
2. Interpret the outcome of investigations for further decision.

- Types of abnormalities in male and female.
- Endocrine causes of sub-fertilities in female.
- Endocrine investigations in the sub-fertile man.
  - FSH, LH, testosterone, prolactin, progesterone


1. What are the endocrine investigations in the sub-fertile man
Lecture 27: Pathology of Vulva, Vagina & Cervix

Department: Pathology

Lecturer: Dr. Jaudah Almagrabi, Dr. Layla Abdullah, Dr. Salwa Baksh

After this lecture student should be able to describe:

1. Non-neoplastic lesions of vulva.
2. Benign tumor of vulva.
3. Pre-malignant and malignant neoplasms of vulva.
4. Pre-malignant and malignant of the vagina.
5. Cervical dysplasia and carcinoma

1. Non-neoplastic epithelial lesions.

TYPE:

- Lichen sclerosis.
- Squamous hyperplasia
  - The incidence of these lesions
  - Clinical appearance
  - Differential diagnosis.

2. Condyloma acuminatum pathogenesis and histological appearance; vulvar Intraepithelial lesions (VIN).

3. VIN pre-malignant lesions, there incidence and their different pathogenesis and the Histological appearance.


5. Pre-malignant lesions of the vagina, incidence, pathogenesis and morphology.

6. Invasive carcinoma of vagina:
   1. Squamous cell carcinoma
   2. Adenocarcinoma

7. Cervical intraepithelial lesions (CINs)

8. Cervical cancer, epidemiology, incidence, its relation to cervical intraepithelial lesions and risk factors, gross morphology, and histological appearance
One of the following is correct regarding vulvar leukoplakia:

A- It is black discoloration of vulva

B- Is a descriptive clinical term and refers to a white plaque or patch on a mucosal surface

C- Always indicates underlying malignancy

D- Is caused by melanoma of the vulva

E- Is always caused by Vitiligo
# Lecture 28: Benign Uterine Pathology

## Department: Pathology

**Lecturer:** Dr. Jaudah Almagrabi, Dr. Layla Abdullah, Dr. Salwa Baksh

After this lecture student should be able to describe:

1. Endometritis
2. Uterine adenomyosis
3. Endometriosis
4. Endometrial polyp
5. Endometrial hyperplasia

1. Definition, pathological features & clinical presentation of uterine adenomyosis
2. Definition, pathological features & clinical presentation of endometriosis
3. Gross & microscopic features of endometrial polyp
4. Definition & types of endometrial hyperplasia
5. Pathologic features of endometrial hyperplasia & risk of endometrial carcinoma

1. Basic Pathology, Kuman, Cotran, Robbin's, 8th edition

Define Adenomyosis and outline the difference between it and endometriosis
Lecture 29: Malignant neoplasms of the Uterine corpus

Department: Pathology

Lecturer: Dr. Jaudah Almagrabi, Dr. Layla Abdullah, Dr. Salwa Baksh

After this lecture student should be able to describe:

1. Carcinoma of the endometrium
2. Tumors of the myometrium, liomyoma and leiomyosarcoma.

1. Incidence of endometrial cancer.
2. Pathogenesis and close association of hyperplasia and cancer to hypertrogenism.
3. Gross morphology
4. Histology and grading of endometrial carcinoma.
5. Tumors of myometrium; liomyoma and leiomyosarcoma; epidemiology, incidence, criteria, gross morphology, and histopathological features.

1. Basic Pathology, Kumar, Cotran, Robbin's, 8th edition

What are the characteristic histological features of liomyosarcoma?
Lecture 30: Tumors of the Ovary

Department: Pathology

Lecturer: Dr. Jaudah Almagrabi, Dr. Layla Abdullah, Dr. Salwa Baksh

Dr. Taha Motamad

After this lecture student should be able to:

1. Describe types of non-neoplastic cysts of the ovary.
2. Classify tumors of the ovaries.
3. Define the percentage, age, incidence & morphology of the common types of ovarian tumors.
4. Explain the hormonal disturbance associated with functional ovarian tumors.
5. Define the methods of spread of ovarian cancer.

1. Non-neoplastic cysts of ovary.
2. Classifications of ovarian tumors.
5. Sex cord-stromal tumors.

1. Basic Pathology, Kumar, Cotran, Robbin's, 8th edition

One of the following is NOT considered an ovarian neoplasm:
A- Teratoma
B- Mucinous cystadenocarcinoma
C- Choriocarcinoma
D- Fibroma
E- Follicular cyst
Lecture 31: Trichomoniasis and sexually transmitted parasites

Department: Medical Parasitology
Lecturer: Prof. Mamdouh Foaad, Dr. Hala Saeed

After this lecture student should be able to:

1. Identify the different parasites involved in STD (Arthropodes: Sarcoptes scabii, Phthirius pubis; protozoa: Trichomonas vaginalis).
2. State the geographic distribution for each.
3. Describe the related life cycles.
4. State the infective and diagnostic stage, pathogenic stage and mode of infection for each parasite.
5. Discuss the clinical significance of the disease process (acute and chronic phases and main complication arising) for Trichomoniasis infection

1) Main aspects of Life-cycle in relation to disease in man
2) Pathogenic stage and mode of infection
3) Pathogenesis of disease in man
4) Associated clinical manifestations

1) Urogenital disease
2) Sexually transmitted disease
3) Coexists with other STD’s, indicator for HIV infections in population
4) Main complications arising

1. Basic Clinical Parasitology, Franklin A. Neva and Harold W. Brown, 6th edition, 2007,
Internet websites: Key word Medical Parasitology; Parasitology; Small Intestinal Parasites; Large Intestinal Parasites; Liver Parasites; emedicine.com (choice specific parasites); CDC.com; and many other web-links.

Briefly answer the following short question:

1) Briefly explain the clinical manifestation associated with the disease?

2) Describe the main method of diagnosis, mentioning the material examined and stage observed?
Lecture 32: Acquired Toxoplasmosis

Department: Medical Parasitology

Lecturer: Prof. Mamdouh Foaad, Dr. Hala Saeed

After this lecture student should be able to:

1. State the geographical distribution of Toxoplasma gondii parasite studied
2. Describe the parasite life-cycle for Toxoplasma gondii parasite studied
3. State the infective and diagnostic stage, pathogenic stage and mode of infection for Toxoplasma gondii infection
4. Describe the pathogenesis pathway for Toxoplasma gondii parasite studied
5. Discuss the clinical significance of the Acquired Toxoplasmosis infection
6. Name the specimen of choice for recovery of Toxoplasma gondii parasite studied
7. Name the drug(s) of choice and alternative therapy for Toxoplasma gondii parasite studied
8. Describe the main aspects of prevention and control for each parasite studied

1) Main aspects of Life-cycle in relation to disease In man
2) Pathogenic stage and mode of infection
3) Pathogenesis of disease in man
4) Associated clinical manifestations
5) Main method of diagnosis and material examined
6) Main drug of choice and alternative therapy
7) Main aspects of prevention and control

1) Acquired disease
2) Zoonotic infection
3) Self limiting and acute disease
4) Main complications arising (CNS, Skin and Eye)
6) Direct and Indirect methods of diagnosis
7) Treatment and management of disease

4. Atlas of Medical Parasitology and Tropical Medicine, Peters and Gillies, 2006

Internet websites: Key word Medical Parasitology; Parasitology; Small Intestinal Parasites; Large Intestinal Parasites; Liver Parasites; emedicine.com (choice specific parasites); CDC.com; and many other web-links.

Briefly answer the following short question:
1) Briefly explain the clinical manifestation associated with the Acute phase of disease?
2) Describe the main method of diagnosis, mentioning the material examined and stage observed?
Lecture 33: Antenatal Care

Department: Obstetrics and Gynecology
Lecturer: Dr: Nawal AlSenani, Dr: Tarik Zamzamy

After this lecture student should be able to:

1. Define the effectiveness of ANC in reducing PNM (booked vs. un-booked patients).
2. Define the role of ANC in health screening and education.
3. Define the milestone visits of ANC (first visit, 2\textsuperscript{nd} and third Trimesters) objectives in each.
4. Discuss the importance of identifying women at higher than average risk.
5. Describe the main interventions during pregnancy (significance and objective).

1. Introduction on the development of ANC until its present status.
2. The major three basic components of ANC care:
   (a) Early and continuing risk assessment.
   (b) Health promotion providing health information, enhancing general knowledge of pregnancy and parenting, and promoting and supporting healthful behaviors)
   (c) Medical and psychosocial interventions and follow-up.
3. Milestone visits in ANC:
   (a) First visit; booking visit; history, physical and main tests and its objectives.
   (b) 2\textsuperscript{nd} Trimester: Screening for anomalies, GDM, Anemia, and BP.
   (c) 3\textsuperscript{ed} Trimester: fetal growth, mode of delivery, and maternal preparation for delivery

**Routine antenatal care include all of the following except:**

A. Regular visits to the antenatal clinics  
B. Laboratory tests including blood group and Rh antibodies screen  
C. Detailed history and physical examination  
D. Urine protein testing in each visit to the antenatal clinics  
E. Glucose tolerance test

**At each antenatal visit, the following should be done except:**

A. CTG  
B. urine dip stick  
C. fetal size assessment and rate of change  
D. maternal weight  
E. Blood Pressure
Lecture 34: Trophoblastic Pathology

Department: Pathology

Lecturer: Dr. Jaudah Almagrabi, Dr. Layla Abdullah, Dr. Salwa Baksh, Dr. Taha Motamad

After this lecture student should be able to:

1. Describe the trophoblastic tumors (Hydatiform mole & choriocarcinoma), including:
   a. Incidence
   b. Morphology
   c. Clinical course

Gestational trophoblastic tumors (incidence, morphology, and clinical course):

1. Hydatidiform mole.
2. Invasive mole.
3. Choriocarcinoma.

All of the following are correct regarding Partial Hydatiform mole EXCEPT

A-The Karyotype is 69, XXY
B- Some villi show villous edema
C-It rarely progress to Choriocarcinoma
D- Trophoblastic Proliferation is diffuse and circumferential

1. 2. 3. 4.
Lecture 35: Diseases of Prostate

Department: Pathology

Lecturer: Dr. Jaudah Almagrabi, Dr. Layla Abdullah, Dr. Salwa Baksh
          Dr. Taha Motamad

After this lecture student should be able to describe:

1. Benign prostatic hyperplasia.
2. Prostatic carcinoma.

1. Incidence, etiology and pathogenesis of benign prostatic hyperplasia.
3. Incidence of prostatic carcinoma.
4. Etiology of prostatic carcinoma.
5. Morphology, gross and histology of prostatic carcinoma.
6. Grading, staging and clinical course of prostatic carcinoma.

1. Basic Pathology, Kumar, Cotran, Robbin’s, 8th edition


Identify the basic histological findings in Prostatic carcinoma?
Lecture 36: Congenital Toxoplasmosis

Department: Medical Parasitology

Lecturer: Prof. Mamdouh Foaad, Dr. Hala Saeed

After this lecture student should be able to:

1. State the ways of transmission of the disease to the fetus
2. Describe the pathogenesis pathway for congenital toxoplasmosis
3. Discuss the clinical significance of the infection
4. Name the specimen of choice for recovery of Toxoplasma gondii parasite both of mother and fetus.
5. Define significance of detection of IgM and IgG
6. Discuss different methods for management the disease in mother and infant
7. Describe the main aspects of prevention and control.

1) Mode transmission of congenital toxoplasmosis
2) Pathogenesis of congenital toxoplasmosis
3) Significance of congenital toxoplasmosis
3) Treatment and management of congenital toxoplasmosis

4. Atlas of Medical Parasitology and Tropical Medicine, Peters and Gillies, 2006
Internet websites: Key word Medical Parasitology; Parasitology; Small Intestinal Parasites; Large Intestinal Parasites; Liver Parasites; emedicine.com (choice specific parasites); CDC.com; and many other web-links.

Briefly answer the following short question:

1) Briefly explain the clinical manifestation associated with the disease?

2) Describe the main method of diagnosis, mentioning the material examined and stage observed?
Lecture 37: Pathology of the Testis & Testicular Adnexa

Department: Pathology

Lecturer: Dr. Jaudah Almagrabi, Dr. Layla Abdullah, Dr. Salwa Baksh, Dr. Taha Motamad

After this lecture student should be able to:

1. Define incidence of testicular tumor.
2. Describe pathogenesis of testicular tumor.

1. Classification:
   - Germ cell tumors
   - Sex cord-stromal tumors
   - Mixed forms
2. Emphasis on the most frequent testicular tumors from the point of view:
   - Incidence
   - Gross appearance
   - Histological appearance
3. Clinical features of testicular tumors and staging.

1. Basic Pathology, Kumar, Cotran, Robbins, 8th edition

Outline the classification of testicular tumors?
### Lecture 38: Reproductive pharmacology: Oxolytics & Tocolytics drugs

**Department: Pharmacology**

**Lecturer:** Prof. M. Solaiman, Prof. A. Moneim, Prof. M. Hagras

After this lecture student should be able to:

1. Describe the pharmacological basis of using drugs for termination of labor, or induction of delivery
2. Identify the potential use of drugs for management of premature delivery.

- Drugs causing uterine contraction: Dinoprostone (Fervidly) Mifepristone with misoprostal (Cytotec)
- Clinical pharmacology of some of these drugs, mechanism, clinical use, pharmacokinetics, adverse effects and contraindications
- Use of Tocolytics drugs for management of premature delivery
- Brief Clinical pharmacology of these drugs


1. What is the mechanism of action of tocolytics drugs in premature delivery?
Tutorials
Tutorial 1: Development of Male Reproductive Tract

Department: Anatomy
Lecturer: Prof. Saed Zaghloul, Dr. Fathia Ahmed

At the end of the tutorial the student will be able to describe:

1) Describe the primitive sex duct, the genital duct, and the external genitalia.
2) Describe the specific stages of the development of the male gonads, genital tract and external genitalia.
3) Define the male sex abnormalities as reflected in the duct system and external genitalia.

1) The urogenital system and its divisions
2) Stages of the development of male reproductive tract.
3) Control of the development of the male reproductive tract.
6) Abnormal development of the male reproductive tract.

1) Langman’s Medical Embryology, Thomas W. Sadler, 2006, 10th edition, Lippincot Williams & Wilkins

1- Mention the different stages of development of male reproductive tract.
Tutorial 2: Development of Female Reproductive Tract

Department: Anatomy
Lecturer: Prof. Saed Zaghloul, Dr. Fathia Ahmed

At the end of the tutorial the student will be able to describe:

1) Describe the primitive sex duct, the genital duct, and the external genitalia.
2) Describe the specific stages of the development of the female gonads, genital tract and external genitalia.
3) Define the male sex abnormalities as reflected in the duct system and external genitalia.

1) The urogenital system and its divisions
2) Stages of the development of female reproductive tract.
3) Control of the development of the female reproductive tract.
6) Abnormal development of the female reproductive tract.

1) Langman’s Medical Embryology, Thomas W. Sadler, 2006, 10th edition, Lippincot Williams & Wilkins

1- Mention the different abnormalities of development of female reproductive tract.
## Tutorial 3: Male & Female Sexual Behavior.

**Department: Physiology**

**Lecturer:** Dr. Khidir Abdel Galil, Dr. Azra Karmani

At the end of the tutorial the student will be able to:

1. Describe the composition & function of the secretion of the sexual organs in the male.
2. Describe the blood-testis barrier.
3. Describe the afferent & efferent pathways of sexual arousal in the male and the neural control of the male sexual act.
4. Define the normal composition of the fertilizing sample of semen and the physiology of the mature spermatozoa.
5. Describe the afferent & efferent pathways for sexual arousal and sexual act in the female.

<table>
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<tbody>
<tr>
<td>2. Blood-testis barrier &amp; its significance to spermatogenesis.</td>
</tr>
<tr>
<td>3. Afferent &amp; efferent pathways for sexual arousal in the male. The effect of psychic stimuli &amp; sexual thoughts...etc.</td>
</tr>
<tr>
<td>4. The neural control of the stages of the male sexual act:</td>
</tr>
<tr>
<td>a) erection</td>
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<tr>
<td>b) ejaculation</td>
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<tr>
<td>i- emission</td>
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<tr>
<td>ii- ejaculation proper</td>
</tr>
<tr>
<td>5. Composition of the normal fertilizing sample of semen.</td>
</tr>
<tr>
<td>6. Composition &amp; function of the secretion of accessory sexual organ in the female.</td>
</tr>
</tbody>
</table>

Independent learning from the CD-ROM.

The computer cluster is in the 2nd floor of the Medical Library, building No. 13.

1- What is the significance of blood-testis barrier to the process of spermatogenesis.

2- Describe the mechanism of sexual arousal in the female.
Tutorial 4: Disorders of gonadal function in males

Department: Clinical Biochemistry

Lecturer: Prof. Adil Abdel Rafee, Dr Fayza F. Al Fayez

At the end of the tutorial the student will be able to:

1. Explain the pathological processes in male gonadal function.
2. Demonstrate how biochemical tests are used to diagnose male gonadal disorders.
3. Interpret the outcome of investigations.

- Hypogonadism.
- Gynecomastia.


1- Mention the different biochemical tests used to diagnose male gonadal disorders.
Tutorial 5: Disorders of gonadal function in female

Department: Clinical Biochemistry
Lecturer: Prof. Adil Abdel Rafee, Dr. Fayza F. Al Fayez

At the end of the tutorial, the student will be able to:

1. Explain the pathological processes in female gonadal function.
2. Demonstrate how biochemical tests are used to diagnose female gonadal disorders.
3. Interpret the outcome of investigations.

- The climacteric.
- Amenorrhea and oligomenorrhea.
- Hirsutism and virilism.


1. Describe the pathological processes in female gonadal function.
Tutorial 6: Testicular & Prostatic Pathology

Department: Pathology

Lecturer: Dr. Layla Abdullah
               Dr: Salwa Baksh
               Dr Taha Mohammad

At the end of the tutorial the student will be able to:

Discuss difficult points related to testicular & prostatic pathology based on their readings and lectures given.

- Guided discussion by a tutor.
- Internet problematic cases discussion or images may be used.

1. Basic Pathology, Kuman, Cotran, Robbin's, 8th edition

Tutorial 7: Female Genital Tract Pathology

Department: Pathology

Lecturer: Dr. Layla Abdullah, Dr. Salwa Baksh, Dr. Taha Mohammad

At the end of the tutorial the students will be able to:

Discuss difficult issues related to female genital tract pathology in classroom based on their readings in books and lectures.

- Guided discussion by a tutor.
- Internet problematic case discussion or Images may be used.

1. Basic Pathology, Kuman, Cotran, Robbin's, 8th edition

Tutorial 8: Sexually Transmitted Diseases

Department : Medical Parasites

Tutor: Prof. Mahmoud Foaad, Dr. Hala Salem

At the end of the tutorial the students will able to:

1- Diagnose the parasites involved in STD.
2- Differentiate between different parasites involved in STD.
3- Identify the preventive measures.

1. Name the specimen of choice for recovery of Trichomonas vaginalis parasite and other parasites sexually transmitted.
2. Name the drug(s) of choice and alternative therapy for each parasite studied.
3. Name the specimen of choice for recovery of the disease develop.
4. Name the drug(s) of choice and alternative therapy for each parasite studied.
5. Describe the main aspects of prevention and control for each parasite studied.

Cognitive skills:
Differentiation between the clinical presenting symptoms in relation to its underlying causative parasite.

4. Atlas of Medical Parasitology and Tropical Medicine, Peters and Gillies, 2006

What are the preventive measures used in STD?
Tutorial 9: ABNORMAL VAGINAL BLEEDING

Department: Obstetrics and Gynecology

TUTOR: Prof. Hassan Jamal

Dr. Haifa Mansouri

At the end of the tutorial the students will able to discuss:

- Definition of DUB
- Incidence and age prevalence
- Is a diagnosis of exclusion
- The treatment depends on age, severity, patient wishes.

Primarily treatment is hormonal only if failed in older women surgery may be considered

1. DUB is an abnormal uterine bleeding, causes, age prevalence,
2. Patterns of DUB.
3. Diagnosis of DUB

Practical
### Practical 1: Dissection of Male Reproductive Tract

**Department: Anatomy**

**TUTOR: Dr. Gamal Said, Prof. Amira**

After this practical student should be able to Demonstrate:

1. The gross anatomy and external features of the male external genitalia including: the penis, scrotum, testis and epididymis
2. The gross anatomy and the anatomical relations of the male pelvic organs including: the prostate, vas deferens, seminal vesicles and ejaculatory duct.
3. The blood supply, lymphatic drainage and nerve supply of the male reproductive system (external and internal sex organs)

   a. The surface anatomy and external features of the male perineum including the external genitalia (penis, scrotum, testis and epididymis)
   b. The structure and anatomical relations of the male pelvic organs including: the prostate, seminal vesicles, vas deferens and ejaculatory duct
   c. Blood supply, venous drainage, lymphatic drainage and nerve supply of the male reproductive tract (both internal and external sex organs)

**Cognitive skills:**

1. Identify the gross anatomy of male reproductive organs

Department: Anatomy

TUTOR: Dr. Gamal Said, Dr. Hanan

After this practical student should be able to Demonstrate:

1. The gross anatomy if the normal female pelvis
2. The gross anatomy (Surface anatomy) of the female external genitalia
3. The gross anatomy of the female pelvic organs including: the ovaries, the uterine tubes, the uterus, the broad ligament and the vagina
4. The uterovesical pouch and the recto uterine pouch (Pouch of Douglas)
5. The blood supply, the lymphatic drainage and the nerve supply of the female reproductive system.
6. The factors supporting the female pelvic organs especially the uterus and vagina.

- The normal female pelvis including the features characterizing the female pelvis from that of males
- True and false pelvis including the pelvic inlet and outlet
- Surface anatomy of the female perineum (external genitalia)
- Gross anatomy of the ovaries, uterine tubes, uterus, uterovesical pouch, recto uterine pouch and vagina
- The broad ligament and its contents
- Blood supply, venous drainage, lymphatic drainage and nerve supply of the female reproductive tract
- The pelvic floor and its contents including levator ani muscle
- The ligaments supporting the uterus in its normal position

Cognitive skills:

1) Identify the gross anatomy of female reproductive organs

At the end of the practical you should be able to define:

The morphologic appearance (gross & microscopy) the most common examples of benign and malignant uterine epithelial and mesenchymal tumors.

1. Jars.
2. Histological slides.
3. Images from internet.

1. Basic Pathology, Kuman, Cotran, Robbin's, 8th edition
Practical 4: Radiology of Reproductive System

TUTOR: Dr. Naushad Ahamed
Dr. Samar Fatheddin       Department: Radiology

At the end of the practical student should be able to:

1. Define the basics of different imaging modalities.
2. Describe the various imaging modalities of the reproductive system in both male and female patients
3. Define normal and abnormal appearances of the reproductive system, as it appears on ultrasound, MRI and contrast studies.

Students will come to the radiology department to watch live cases in Ultrasound and Fluoroscopy


Practical 5: Histology of the Normal Male Reproductive Tract

Department: Anatomy

TUTOR: Dr. Gamal Said, Dr. Hanan Mostafa

After this practical, student should be able to Demonstrate:

1. The normal histology of the testis and seminiferous tubules
2. The normal histology of the spermatozoa
3. The normal histology of the male accessory glands and excretory ducts including: the prostate, the epididymis, the vas deferens, seminal vesicles and the ejaculatory duct.
4. The normal histology of the penis

- Histology of the testis and seminiferous tubules including the interstitial tissue and Leydig cells
- Normal structure of the sperm
- The histological structure and the type of tissues forming the prostate, seminal vesicles, vas deferens, epididymis and ejaculatory duct
- The histological structure of the penis and penile urethra

Practical 6: Diagnosis of Pathologies Specimen of Male Genital System

Department: Pathology
TUTOR: Dr. Shereen Ibrahim, Dr. Ayman Ghanim, Dr. Shugufta Mufti, Dr. Shabnum Sultan, Dr. Azhar Qayyum

At the end of the practical student should be able to:

1. Describe the various gross pathological lesions of the testes and prostate.
2. Recognize the histological appearance of the most common examples of testicular and prostatic lesions.

1. Jars
2. Histological slides.
3. Various images in Internet & Kodakromes

1. Basic Pathology, Kuman, Cotran, Robbin's, 8th edition
## Practical 7: Histology of the Normal Female Reproductive Tract

### Department: Anatomy

**TUTOR:** Prof. Amira / Dr. Gamal Said

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**After this practical, student should be able to Demonstrate:**

1. The normal histology of the ovary including the ovarian follicle.
2. The normal histology of different stages of the ovarian follicles
3. The normal histology of the uterine tube
4. The normal histology of the uterus and cervix
5. The normal histology of the vagina

- Histology of the ovary including the histological structure of ovarian follicles at different stages
- Histology of the uterine tubes
- Histology of the uterus and specifically the cervix
- Histology of the vagina

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## Practical 8: Diagnosis of Pathology Specimen of Female Genital System II

**Department: Pathology**  
**TUTOR:**  
- Dr Shereen Ibrahim  
- Dr Ayman Ghanim  
- Dr Shugufa mufti  
- Dr Shabnum Sultan  
- Dr Azhar Qayyum

At the end of the practical you should be able to define:

1. The morphology (gross & microscopy) of the most common examples of primary and secondary ovarian tumors.

    1. Jars.???????
    2. Histological slides.
    3. Images from Internet

1. Basic Pathology, Kuman, Cotran, Robbin's, 8th edition

CLINICAL PRESENTATION
CLINICAL PRESENTATION 1: ABNORMAL PUBERTY

Department: Pediatrics

TUTOR: Dr. Al-Agha

DR. Roua Jajoom

At the end of the presentation you should be able to define:

1-. Describe the Pathophysiology of abnormal pubertal development.
2- Define various medical disorders (names only) that might result from abnormal pubertal development.

1. Definition of puberty.
2. Manifestations of puberty.
3. Prepubertal stage.
4. Changes during puberty in both male and female.
5. Precocious Puberty.
6. Delayed Puberty.


At the end of this clinical presentation student should be able to differentiate normal from abnormal pubertal development and disorders related to the abnormal pubertal development.

1. What are the major pubertal changes that occur in male and female?
CLINICAL PRESENTATION 2: Ectopic Pregnancy

Department: Obstetrics and Gynecology
TUTOR: Prof. Rouzi Al-Khotani    Dr. Fatmah AlEtebi

Upon completing this topic the students should be able to discuss:

- The importance of having a high index of suspicion for ectopic
- The importance of early diagnosis of ectopic
- The interpretation of diagnosis tests (U/S & BHCG)
- The different options of management of ectopic

- Definition of ectopic pregnancy
- Epidemiology, and changes in incidence over years
- Risk factors

Natural course of untreated ectopic: Tubal Rupture, pregnancy resorption, Tubal abortion and abdominal pregnancy

- Diagnosis of EP:
  - Acute ruptured ectopic: DD of Acute abdomen
  - Unruptured ectopic: suspected ectopic bases on SS
  - All pregnancies are ectopic until proved otherwise

- Diagnosis tests
  - HC (the discriminatory zone)
  - TV U/S
  - Serum progesterone

- Management of ectopic
  - Surgical Management:
  - Medical management: criteria
  - Expectant management: criteria.

Patients at risk for ectopic pregnancy are those:
   a. who had a previous history of ectopic pregnancy
   b. who uses the combined pill for contraception
   c. who are subfertile undergoing assisted conception
   d. who had recurrent vaginal candidiasis
   e. patient with recent history of appendectomy
PBL
Reproductive module PBL case (STUDENT COPY)

Day I

In one of the popular women health magazine the following letter was published on Wednesday March 18th 2009:

“Dear Doctor, my name is Samar, I am 25 years old and have been married for two years… I am sending you this letter seeking your advice…. It has been two years now and I did not get pregnant. My husband and I have been attempting to become pregnant for the last 20 months without success…. Everyone around me is telling me to go and see a doctor but I think it is too early, should I be worried that I did not conceive yet?...I am not sure if it helps you to know about my periods but I never had regular periods,… I usually get my period every two months… My cousin who is a doctor said that there are certain tests that I should do to help diagnose the problem.. he also mentioned that it might be my hormones which may be affecting my ovulation and my menstrual cycle. I am not sure I understand what he said… My mother said that if I lose weight might be able to conceive,… I know I am overweight… my height is 160cm and I weigh 94 Kg, is my mother right? Could my weigh be a factor preventing me from getting pregnant?....Please Doctor could you help me and tell me what I should do?”

The reply for this letter was published on Saturday April 4th

“Dear Mrs Samar, although there are many signs in your letter that shows that there might be a problem we strongly advise you to have some laboratory tests and check your OB/GYN Doctor..Best of Luck”

Day II

This weekend Samar stumbled on an article written by Dr. Nabeel Bondagji that she thought was related to her problem the following is a piece of the article:

The human reproductive process is complex. To become pregnant, the intricate processes of ovulation and fertilization need to work just right. Each month the pituitary gland in a woman's brain sends a signal to her ovaries to prepare an egg for ovulation. The pituitary hormones — follicle-stimulating hormone (FSH) and luteinizing hormone (LH) — stimulate the ovaries to release an egg. This is called ovulation. It is during this time a woman is fertile (usually about day 14 of her menstrual cycle). The egg travels through the fallopian tube and can be fertilized about 24 hours after its release. Conception is more likely to occur when intercourse takes place one to two days prior to ovulation. For pregnancy to occur, a sperm must unite with the egg in the fallopian tube during this time. Sperm are capable of fertilizing the egg for up to 72 hours and must be present in the fallopian tube at the same time as the egg for conception to occur. In order for a sperm to reach an egg, the man must have an erection and ejaculate enough semen to deliver the sperm into the vagina. There must be enough sperms, and it must be the right shape and move in
the right way. In addition, the woman must have a healthy vaginal and uterine environment so that the sperm can travel to the egg. If fertilized, the egg moves into the uterus where it attaches to the uterine lining and begins a nine-month process of growth. For some couples attempting pregnancy, something goes wrong in this complex process, resulting in infertility. The cause or causes of infertility can involve one or both partners.

The most common causes of female infertility include fallopian tube damage or blockage, endometriosis, ovulation disorders, elevated prolactin, polycystic ovary syndrome (PCOS), early menopause, benign uterine fibroids and pelvic adhesions. Polycystic ovary syndrome (PCOS). PCOS is associated with insulin resistance and obesity and hairsutism).

**Day III**

Samar lab tests showed reverse FSH\LH rate, mild elevation of the testosterone level and the u\'s report showed multiple small subcortical cysts suggestive of the diagnosis of polycystic ovary syndrome.
DIRECTED LEARNING 1: Review of Hypothalamus – Anterior Pituitary Gonadal Axis in Male & Female

TUTOR : Dr. Khidir Abdel Galil

Dr. Azra Karmani

Department: Physiology

Upon completing this topic the students should be able to:

1- Describe the concept of hormonal control of reproduction.
2- To comprehend the hypothalamic-pituitary-gonadal interaction in male & female.
3- Describe the control of gonadotropin both in males & females

1- Hypothalamic-pituitary gonadal axis both in males & females.
2- Effects of GnRH from the hypothalamus on the gonads of both sexes
3- Function of FSH and its effect on both sexes
4- Function of LH and its effect on both sexes
5- The negative feedback control of gonadotropin
6- The effects of Inhibin hormones in both sexes & their role in the feedback control
7- Cyclic pattern control of gonadotropin in the females reproduction.


1- Describe the Cyclic pattern control of gonadotropin in the females reproduction.
DIRECTED LEARNING 2: Normal Labor (Video show)

TUTOR: Dr. Nabeel Bondagji      Dr. Wafa Faqeh
Department : Obstetrics and Gynecology

Upon completing this topic the students should able to:
- Describe the process of normal labor and delivery and how to provide optimal care and reassurance for the parturient and timely recognition of abnormal events.
- Define the diagnosis of labor
- Define the stages of labor
- Describe the mechanism of labor
- Identify the outline of management of patient in labor

- Definition of labor
- Preparation for labor: Engagement, Lightening, Braxton Hicks contractions, Cervical effacement
- The stages and phases of labor
  - First stage and phases of labor:
  - Second stage and mechanism of delivery: Descent, flexion, internal rotation, extension, external rotation and expulsion
  - Third stage of labor: Mechanism of placental delivery
  - Fourth stage of labor
- Management of women in labor: Fluid intake, basic investigations( CBC, Blood group, hepatitis)
- Maternal monitoring and monitoring of progress of labor
  - Fetal monitoring in labor
  - Potential complication: Maternal and fetal

In the third stage of labour the sings of placental separation include all of the following Except
a) The uterus becomes firm and globular
b) Lengthening of the umbilical cord
c) A gush of blood
d) Passage of the membranes
e) None of the above
DIRECTED LEARNING 3: Pregnancy Loss & miscarriage

TUTOR: Prof. Hassan Jamal  Dr: Samar Nazer

Department : Obstetrics and Gynecology

Upon completing this topic the students should able to :

1. Identify the different types of miscarriage
2. Describe the difference in the handling, management and of recurrent and single miscarriage
3. Describe difference between associated factors VS. causes of miscarriage

- Definition of miscarriage vs. labor
- Incidence of clinical vs. total miscarriage
- Associated factors of miscarriage
- Causes associated with recurrent miscarriage
- Diagnosis of the different types of miscarriage: Threatened, inevitable, incomplete and complete (S&S and investigations) and management in each case
- DD of miscarriage early bleeding in pregnancy
- Recurrent miscarriage: Definition, Diagnosis (test and investigations)
- Management of recurrent miscarriage


Inevitable abortion is diagnosed when a patient is presented by.

a) Vaginal bleeding, abdominal pain and closed cervix
b) Vaginal bleeding and closed cervix with no pains
c) Vaginal bleeding and open cervix
d) Vaginal bleeding, abdominal pain and passage of tissues
e) Vaginal bleeding, abdominal pain and fever
DIRECTED LEARNING 4(A): Fertilization & Implantation

TUTOR: Dr. Hamid saleh, Dr. Fathia Ahmed  
Department : Anatomy

After this directed learning, student should be able to:
1. Define the process of Fertilization
2. Describe the phases of fertilization
3. Describe the outcome of fertilization

1) Langman’s Medical Embryology, Thomas W. Sadler, 2006, 10th edition, Lippincot Williams & Wilkins

1. Illustrate with a diagram the phases of fertilization.
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<tr>
<th>DIRECTED LEARNING 4(B): Fertilization &amp; Implantation</th>
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</thead>
</table>

**TUTOR: Dr. Hamid Saleh, Dr. Fathia Ahmed**  
**Department: Anatomy**

After this directed learning, student should be able to:

1. Define the process of Implantation
2. Explain the implantation stages and development
3. Describe the abnormal implantation sites & ectopic pregnancy.

- Stages of implantation
- Abnormal implantation sites
- Ectopic pregnancy
- Clinic Notes

1) Langman’s Medical Embryology, Thomas W. Sadler, 2006, 10th edition, Lippincot Williams & Wilkins

1. Describe the different types of ectopic pregnancies