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SAUDI SPECIALITY CERTIFICATE IN
OBSTETRICS & GYNAECOLOGY
(SSCOG)

Introduction
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General Information

INTRODUCTION

The Saudi Council for Health Specialties introduced residency training in Obstetrics and Gynaecology in 1995. The training entails a broad spectrum of experience in Obstetrical and Gynaecological diseases. The educational programme provides an opportunity for increasing responsibility with appropriate supervision and formal instruction. The objective is to train competent, safe, skilled and knowledgeable specialists capable of functioning independently in the field of Obstetrics and Gynaecology. The Saudi Council published a booklet in 1995, focusing on objectives, training requirements, structure and content of training. The guidelines for structured training ensure that the resident gets substantial, diverse and appropriate surgical experience after he/she has mastered the basic skills. For this purpose accurate and comprehensive documentation of individual resident's experience is monitored at all levels of residency training. In addition to continuous evaluation through rotations, progression to higher levels of responsibility is subject to passing end of year examinations. Candidates who successfully complete the training and acquire knowledge and skills of the appropriate standard set by the Scientific Board are awarded the Saudi Specialty Certificate in Obstetrics & Gynaecology.

Residency training is essentially in-hospital training and is done only at centers accredited by the Saudi Council. Regional Training Directors representing the accredited Institutions, meet regularly to monitor the progress of residents and the standards of training in general. Residency training in Obstetrics and Gynaecology, like any other specialty, is a measure of excellent professional standards set by the Obstetricians and Gynaecologist to train younger generations of doctors who will master the art of tomorrow. The Saudi Council for Health Specialties in this short span of time has made enormous contribution to the development of specialist training in the Kingdom of Saudi Arabia.

ENTRY CRITERIA

Medical graduates opting for higher professional training in Obstetrics and Gynaecology are required to sit for the admission examination held annually by the Saudi Council.

The examination consists of multiple choice questions covering applied basic science and broad spectrum of common medical conditions. It is necessary to obtain a pass mark, for registration in the training programme.

ACCEPTANCE FOR RESIDENCY TRAINING

All accredited centers invite applicants for residency training programme. Each institution has it's own indigenous set up for selection of candidates for the residency training. The Saudi Council requirements include the following:

1. Written application together with 4 passport size photographs.
2. Certified copy of the MBBS, MBchB or equivalent.
3. Saudi Council admission examination score.
4. Internship Certificate
5. Two written references
6. A letter of sponsorship approving that the candidate can join full time training for the whole period of the programme (5 years).
7. Signature of an obligation to abide by the rules and regulations of the training programme of the hospital and of the Saudi Council for Health Specialties.
8. Copy of the ID badge.
9. Medical Report stating the candidate is fit.

REGISTRATION

Registration with Saudi Council is mandatory. The above specified documents are necessary for registration.

REGISTRATION FEES

– Application should be accompanied with cheque of registration fee.

– Annual fee to be paid to Saudi Council for each training year. (The amount is subjected to the Saudi Council rules).

ACCREDITATION

Approved residency posts are available in centers accredited by the Saudi Council for training in Obstetrics & Gynaecology. The candidate may spend the whole training period in one of more recognized training centers as approved by the Regional Training Committee.

TRANSFERS

- Transfer to another center should be mutual agreement between receiving and releasing training centers and only against an approved residency post.

- Transfer should be final approval by the Regional Supervisory Training Committee

GENERAL TRAINING INSTRUCTIONS

- This is a five year full time training programme. Training is comprehensive which includes inpatient, ambulatory and emergency room care.

- Trainee is involved in direct patient care with gradual progression of responsibilities.

- Regular and punctual attendance is necessary for instructional and learning sessions. A minimum of 75% attendance record is necessary for promotion to higher level of residency training.

- Continuity of the effort is essential for self learning through 'on-the-job' experience.

- Continuity of learning process through study of journals, review articles and keeping abreast with the recent advances is essential part of the training programme.

ROTATIONS

- Resident rotations are organized through various units of the department and other related specialities (see p. 20) to maximize the exposure to various disciplines as well as to learn skilled procedures in specialized units.

- Residents are assigned higher levels of responsibilities in tandem with progress of their theoretical knowledge and clinical skills.

- One year training year comprises four periods of rotations each of three months duration.

- Training year commences on the 1st of October of the Gregorian calendar for 12 months

EVALUATION

Residents are continuously evaluated throughout their training and evaluation comprises the following:

(i) End of rotation evaluation:

At the end of each rotation, the Supervising Consultant/team shall provide the Training Committee with a written evaluation of resident's performance during that rotation. The evaluation pertains to assessment of resident's theoretical knowledge, clinical skills, attitude and attendance at Journal Club meeting, tutorials and topic presentations, etc.

(ii) End of Training Year Examination:

The programme incorporates annual written examination to assess depth of theoretical knowledge, understanding of the principles of Obstetrics & Gynaecology and critical analysis of problem solving. The examination comprises multiple choice question format from which the candidate has to choose the single best answer.

(iii) Annual Overall Evaluation

This includes:

(أ) Summation of end of rotations evaluations (50% of the total mark).

(ب) Result of the end of training year examination (50% of the total mark).

(ج) Overall passing scores for all levels of training is as stated in the "General Examinations Regulations of the Council".

(د) If the overall evaluation as stated in (iii) is not achieved, the candidate is considered failed and should repeat that specific year, residents are allowed a total of three attempts. Those failing the third attempt will be disqualified from the residency training program. Please refer to the "General Examinations Regulations of the Council".

PROMOTION

- Annual promotion from Residency Level to the next depends on overall annual evaluation.

- Promotion to Senior Residency level depends on annual evaluation, passing the Part I examination and Training Programme Committee Agreement.

EXAMINATION

Examination is composed of two parts. Topics for both parts are as listed in the syllabus.

Part I Examination:

- The examination is held at least once a year in one or more of the regions (Central, Western and Eastern Region). It is usually held in the month of September of each training year.

- It is a written examination of multiple choice questions with single best response and includes applied basic science and clinical knowledge of Obstetrics and Gynaecology.

- Residents can sit for examination at the last quarter of the first year of training.

- Passing Part I examination is a pre-requisite for promotion to senior residency.

- Residents are allowed a total of three attempts. Those failing the third attempt will be disqualified from the residency training programme.

- Disqualified candidates can re-apply afresh for the residency training two years after their last failed attempt at the Part I examination.

- Scientific Board in exceptional circumstances may grant permission to one or more re-sit for Part I examination for those candidates who failed in all three attempts.

- Appeal for re-sit will be thoroughly studied and carefully scrutinized by the Scientific Board before it is referred to the Executive Board for final approval.

Part II Examination:

Two research papers are prerequisite to sit for Part II Examination. These papers must be accepted by the Scientific Board Committee before you can sit for the final exam (this will replace the previous required case record book for those candidates entering the examination on October 2001).

This examination is held at least once a year and has two main components i.e. written and clinical.

I. The Written examination

This examination consist of Multiple Choice Questions of single best answer type. The examination is held in two separate sessions. One in the morning and another in the afternoon.

Passing this part is a pre-requisite for admission to the clinical part of the final examination.

Passing the written part of the examination is valid for 3 years. Those candidates who failed to pass the clinical part within this period are obliged to re-sit the written examination.

The passing score for the written examination is as stated in the "General Examination Regulations of the Council".

II. The Clinical Examination:

The pass mark for this examination will be a summation of its components. These components may include the following:

1) Slide Demonstration

2) *OSCE* (Objectively Structured Clinical Examination)

3) Oral Examination

4) Bedside Examination

HOLIDAYS

1. Residents are entitled for four weeks vacation annually and maximum of 10 days for both Eid holidays and emergency leave.

2. Sick and maternity leave shall be compensated for during or at the end of training.

3. Any candidate consuming more than ninety days of annual leave per training year, regardless of the purpose, will have to repeat that training year.

4. Study leave for a maximum of one week is allowed after agreement of the Training Program Director in the center.

ON-CALL DUTIES

- On-call duty shall be an average of one every three to four nights (minimum of 7 calls per month).

- On-call duty comprises 24 hours except when working in emergency room.

- Residents are required to perform regular duty post on-call and ensure continuity of patient care.

CERTIFICATION

Candidates who have successfully passed the Final examination are awarded the Saudi Specialty Certificate in Obstetrics & Gynaecology.

Aims and goals of training programme in Obstetrics & Gynaecology

The aim of the Training Programme in Obstetrics & Gynaecology is to provide a competent, safe and skilled Specialist in all matters relating to the diagnosis and management of obstetrical and gynaecological patients. The programme of training comprises theoretical, clinical and practical components.

1. Theoretical Education:

The aims of the theoretical studies are:

أ. The accumulation of the greatest amount of sound and recent knowledge in the specialty.

ب. Promotion of capabilities and aptitudes in systematic research and clear expression in any subject relevant to the specialty.

ج. Development of the abilities to translate from the English language to acceptable medical Arabic and vice versa.

NB: No specific teaching manuals or textbooks are designated for the acquisition of knowledge. The trainee is unrestricted to choose from the medical literature (books and periodicals). The duty of the teachers or supervisors is to offer the trainee the necessary guidance and orientation to the good and modern sources of the specialty while delivering a good number of selected courses and lectures.

2. Clinical Experience:

The aims of this training are:

أ. Acquisition of experience in writing good histories, conducting thorough physical examinations and being able to present cases and to discuss clearly their clinical workup.

ب. The arrival at an exact diagnosis in obstetrical and gynaecological cases based on some systemic exploratory methods and the elaboration of satisfactory procedures in the management.

ج. Acquisition on sufficient experience in the application of variable treatments, with special awareness during any unforeseen accidents that might complicate the case and the ability to improvise an alteration in the mode of treatment or the programme of action accordingly.

د. Acquisition of human, dignified and ethical conduct in dealing with patients.

NB: Clinical training should take place under direct supervision of professors, trainers or senior residents.

3. Practical Training:

The aims of the training are:

To prepare the graduate trainee to be able to undertake safely all the procedures and operations in obstetrics and gynaecology with the exception of some special operations pertaining to higher specialization. The acquisition of training should be in a structured manner.

Educational Objectives for Obstetrics and Gynaecology Residency Training

1. Attitude and Ethics:

The Resident should:

i) Be able to relate to female patients, within the acceptable Islamic teaching, in an understanding manner, with respect to the patients' dignity and individuality.
ii) Have an awareness of his/her capabilities, responsibilities, and limitations.
iii) Have knowledge of the purpose of research and familiarity with the use of reference material in managing clinical problems.
iv) Assume a responsibility for teaching patients, and collegues, including medical students and health care professionals.
v) Be able to establish effective interpersonal relationships with patients, their families and other health care personnel.
vi) Accept responsibility to the community at large to improve medicine through a personal example of professional excellence, self-discipline, and human concern.
vii) Learn the importance of an adequate record-keeping system as a tool in diagnosing medical problems, managing treatments, and assessing quality of care.

2. Normal Obstetrics:

The Resident should:

i) Demonstrate knowledge and an understanding of embryology.
ii) Be able to describe the process of human conception.
iii) Demonstrate knowledge of the normal development of the fetus and placenta, and the expression of developmental abnormalities in clinical problems.
iv) Be able to demonstrate knowledge and understanding of maternal and fetal physiology during the course of human pregnancy.
v) Be able to provide comprehensive prenatal care.
vi) Be able to manage labor and delivery successfully including interpretations of antenatal and intrapartum monitoring of the fetus.
vii) Demonstrate skills in monitoring the normal recovery process after delivery, including recognition, evaluation and management of problems of the puerperium.
viii) Be able to provide adequate instructions, support and management of the common problems of lactation.

ix) Be able to resuscitate the newborn.

3. Abnormal Obstetrics

The Resident should:

i) Be able to list symptoms, signs and causes of any abnormalities in the first trimester and should be able to set a management plan.
ii) Be able to diagnose and manage intrauterine fetal death.
iii) Be able to diagnose and manage all types of bleeding in obstetric practice.
iv) Be able, when faced with a medical or surgical disease during pregnancy, to describe and manage the effects of pregnancy on the disease and the effects of the disease and its treatment on the outcome of pregnancy.
v) Be able to outline a plan of management for isoimmunized pregnancies.
vi) Demonstrate an understanding of the genetics and embryology of multiple pregnancy, explain its effects on the mother and fetus, and outline and carry out a plan of managing pregnancy, labor and delivery.
vii) Be able to detect and manage intrauterine growth retarded fetuses.
viii) Be able, when faced with PROM, to perform the procedures necessary to make a diagnosis, describe the potential complications to the mother and the fetus, and to develop and conduct a management plan.
ix) Be able, when faced with preterm labor, to perform, the diagnostic procedures to confirm thediagnosis, list possible precipitating causes, describe the pathophysiology of each, and develop and carry out a plan of management.
x) Be able to make appropriate decisions to induce labor and manage the induction process.
xi) Be able, when faced with an abnormally progressing labor, to identify sources of clinical information necessary to make decisions, outline a plan of management, and demonstrate the skills necessary to carry out the plan.
xii) Be able to describe changes in fetal status both antepartum and intrapartum, list causes of these changes, outline a plan of management for each cause, and demonstrate the ability to use and interpret fetal surveillance techniques.
xiii) Be able to manage the third stage of labor and its complications.
xiv) Be able to describe indications, complications, and contraindications as well as demonstrate skills in performing the following:

- Forceps delivery
- Vacuum extraction

- Caesarian section
- Breech delivery
- Vaginal twin delivery
- Manual removal of placenta

xv) Be able to diagnose and manage all types of acute obstetrical emergencies.

xvi) Be able to describe and/or perform each of the following:

- Amniocentesis
- Episiotomy and its repair
- Repair of all degrees of perineal tear
- Repair of vaginal and cervical laceration
- External cephalic eversion
- Evacuation of perineal hematoma

xvii) Be well informed on obstetric analgesia and anesthesia, and their effects.

xviii) Be able to advise on Family Planning, within the framework of our Islamic teaching and demonstrate the necessary skills to implement the various methods.

xix) Be able to acquire basic skills in obstetrics and gynaecological ultrasound scanning.

xx) Be aware of the causes of maternal as well as perinatal morbidity and mortality.

4. Gynaecology:

The Resident should:

i) Be able to describe the surgical anatomy of the female pelvis.

ii) Be able to describe the normal development of the urogenital tract.

iii) Be able to state the differential diagnosis of amenorrhea and produce a management plan.

iv) Be able to list causes of recurrent pregnancy losses, outline a plan of management and carry out therapeutic measures.

v) Be able to diagnose and manage various types of vaginal infections.

vi) Be able to diagnose and manage various types of pelvic inflammatory diseases and should also describe the pathogenesis of the condition.

vii) Be able to diagnose and manage cases of urinary tract infections.

viii) Be able to diagnose and manage endometriosis and be able also to describe the pathogenesis and complications of the condition.

ix) Be able to illustrate the causes of dysmenorrhea and should be able to diagnose and manage the condition.
x) Be able to diagnose and manage cases of genital prolapse.
xi) Be able to diagnose and manage cases of uterine fibroids.
xii) Be able to outline a plan for evaluation and management of pelvic masses.
xiii) Be able to diagnose and manage urinary incontinence.
xiv) Be able to demonstrate knowledge of the physiology of the female reproductive cycle and the process of its abnormalities and be able to manage them.
xv) Be able to evaluate cases of hirsutism, explain the pathophysiology and carry out specific therapy when indicated.
xvi) Be able to evaluate cases of galactorrhea, explain the pathophysiology, establish a diagnosis and provide adequate management.
xvii) Be able to diagnose and manage cases of polycystic ovaries.
xviii) Be able to demonstrate knowledge of male infertility and perform basic workup.
xix) Be able to diagnose and manage menopause.
xx) Be able to diagnose and manage all types of infertility.
xxi) Be able to diagnose and refer cases of vulval and vaginal malignancies.
xxii) Be able to screen and diagnose all cases of gynaecological malignancies, and undertake appropriate referral for management.
xxiii) Be able to acquire background in colposcopy, hysteroscopy and laser application in obstetrics and gynaecology.
xxiv) Be able to provide evidence of understanding the pathology of GTN, provide a differential diagnosis, develop a plan of investigations, and institute initial therapy and follow up care.
xxv) Be able to perform the following gynaecological surgeries:

1. External Genitalia:
   أ. Local excisions and incisions
   ب. Biopsies
   ج. Bartholin's cyst marsupialization and excision
   د. Surgery of imperforate hymen
   ه. Perineorrhaphy and repair of old perineal lacerations

2. Vaginal operations and reconstructions for:
   أ. Septum
   ب. Injuries

ج. Cystocele and rectocele
د. Enterocele
ه. Colpocleisis
و. Post hysterectomy vaginal prolapse
ز. Vaginal cysts

3. Uterus and pelvis other than transabdominal procedures
   أ. Cervical dilatation and fractional curettage and ERPOC
   ب. Suction curettage
   ج. Cervical biopsy
   د. Cervical cautery, cryosurgery
   ه. Cervical conization
   و. Cervical colpotomy, including drainage of pelvic abscess
   ز. Vaginal hysterectomy, with or without vaginal repairs
   ح. Insertion of IUCDs

4. Uterus by transabdominal approach
   أ. Abdominal incisions (vertical and transverse incisions)
   ب. Abdominal hysterectomy, including supracervical and total
   ج. Myomectomy
   د. Uterine suspension

5. Fallopian tubes
   أ. Salpingectomy
   ب. Segmental resection
   ج. Salpingostomy
   د. Tubal ligation

6. Ovary
   أ. Ovarian biopsy
   ب. Oophorectomy
   ج. Ovarian cystectomy

7. Laparoscopy
   أ. The resident should be familiar with, and be able to perform diagnostic laparoscopies.
   ب. The resident should acquire background in operative laparoscopy.

8. Hysteroscopy

أ. The resident should be familiar with, and be able to perform diagnostic Hysteroscopy.

ب. The resident should acquire background in operative Hysteroscopy.

9. Bladder and Bowel

   The resident should be able to recognize and repair injuries on bladder and bowel.

10. Upper abdominal exploration

    The resident should be able to explore the upper abdomen and recognize palpable abnormalities.

xxvi) Be able to recognize and know the principles of treatment of the post-operative complications.

Structure of Training Programme in Obstetrics and Gynaecology

This is a five year programme of structured training in Obstetrics and Gynaecology. It is divided into stages:

1. *Junior Residency* (36 months including R1, R2 and R3)

Content: The following is the content of the junior residency training period, that includes both theoretical and practical aspects. This training will be conducted through several activities such as lectures, seminars, journal clubs, clinico-pathological meetings and clinical rotations.

The content of this period will include the following:

OBSTETRICS:

- Embryology and abnormal deviations
- Human conception
- Normal development of the fetus and placenta and abnormal deviations
- Maternal and fetal physiology during human pregnancy
- Prenatal care
- Management of labor and delivery and interpretation of intrapartum monitoring of the fetus
- Recognition and management of puerperal problems
- Recognition and management of the common problems of lactation
- Resuscitation of the newborn
- Management of intrauterine fetal death
- Genetics and embryology of multiple pregnancies
- Antenatal and intrapartum management of multiple pregnancies
- Management of intrauterine growth retardation
- Diagnosis and management of premature rupture of membrane
- Diagnosis and management of preterm laor
- Antenatal fetal monitoring and management of its abnormalities
- Management of third stage of labor and its complications
- Indications, complications and contraindications of instrumental deliveries
- Indications and complications of caesarian section
- Management of acute obstetrical emergencies
- Basic ultrasound in Obstetrics
- Techniques and indications of the following procedures (see Table 1):

i) Episiotomy and its repair
ii) Repair of all degrees of perineal tear
iii) Repair of vaginal and cervical lacerations
iv) Instrumental deliveries
v) Breech deliveries
vi) Vaginal twin deliveries
vii) Manual removal of placenta
viii) Lower segment caesarian section

GYNAECOLOGY:

- Implementation of family planning methods within the framework of our Islamic teaching
- Basic ultrasound in gynaecology
- Diagnosis and management of vulval and vaginal infections
- Anatomy of the female pelvis
- The normal development of the urogenital tract
- Diagnosis and management of all types of pelvic inflammatory diseases
- Diagnosis and management of urinary tract infections
- Diagnosis and management of dysmenorrhea
- Physiology of female reproductive cycle and the pathophysiology of its abnormalities and its treatment
- Indications and techniques of diagnostic laparoscopy
- Recognition and principles of treatment of post operative complications
- Surgical techniques in performing the following procedures (see Table 2)

1. External genitalia
   - Local excision and incision, biopsies and Bartholin's cyst marsupialization

2. Internal genitalia
   - Cervical dilatation and fractional curettage, evacuation of retained produce of conception
   - Suction curettage
   - Cervical suture for incompetent cervix
   - Insertion of IUCDs
   - Cervical cautery

3. Abdomen
   - Diagnostic laparoscopies
   - Abdominal incisions (vertical and transverse)

4. Fallopian tubes
   - Salpingectomy

- Segmental resection
- Salpingostomy
- Tubal ligation

Supervision:

Residents will be supervised by the team consultant(s) of that particular rotation which must be followed up by the Director of Training.

Responsibilities:

Responsibilities will be outlined for each rotation period by the regional training committee or Director of Training, based on the level of training of the candidate.

2. *Senior Residency* (24 months including R4 and R5)

Content: The following is the content of the senior residency training period that includes both theoretical and practical aspects. This will be through several activities such as lectures, seminars, journal clubs, clinico-pathological meetings, and clinical rotations.

OBSTETRICS:

- Diagnosis and management of all types of bleeding in obstetric practice
- Understanding the concept of maternal as well as perinatal mortality and morbidity
- Diagnosis, management and follow up of medical and surgical diseases of pregnancy
- Diagnosis and management of isoimmunized pregnancies
- Indications and management of induction of labor
- Management of abnormal labor
- Obstetric analgesia, anesthesia and their effects on the mother and fetus

GYNAECOLOGY:

- Diagnosis and management of amenorrhea
- Diagnosis and management of frequent pregnancy losses
- Pathogenesis, diagnosis and management of endometriosis
- Diagnosis and management of genital prolapse
- Diagnosis and management of uterine fibroid
- Evaluation and management of pelvic masses

- Diagnosis and management of urinary incontinence
- Pathophysiology, evaluation and testament of hirsutism
- Pathophysiology, diagnosis and management of galactorrhea
- Diagnosis and management of polycystic ovaries
- Male infertility and the basic workup
- Diagnosis and management of menopause
- Diagnosis and management of all types of infertility
- Diagnosis and management of vulval and vaginal malignancies
- Diagnosis and management of abnormal uterine bleeding and application of hysteroscopy for management
- Application of colposcopy, hysteroscopy, and laser therapy in gynaecology
- Diagnosis and management of cervical and uterine malignancies
- Diagnosis and management of ovarian malignancies
- Diagnosis and management of gestational trophoplastic neoplasia
- Performance of the following procedures (see Table 3):

1. External genitalia:
   - § Bartholin's gland excision
   - § Hymenal operations including imperforate hymen
   - § Perineorrhaphy and repair of old perineal lacerations

2. Vaginal operation and reconstruction for:
   - § Septum
   - § Injuries
   - § Cystocele and rectocele
   - § Enterocele including abdominal repair, vaginal repair, and colpocleisis
   - § Vaginal cysts

3. Uterus and pelvis other than transabdominal procedure:
   - § Colposcopy and cervical biopsy
   - § Cervical cautery and cryosurgery
   - § Cervical conization
   - § Posterior colpotomy, including drainage of pelvic abscess
   - § Vaginal hysterectomy, with and without vaginal repairs
   - § Diagnostic hysteroscopy

4. Uterus by transabdominal approach:
   - § Abdominal hysterectomy, including supracervical and total
   - § Myomectomy
   - § Uterine suspension

5. Ovary:
   - § Ovarian biopsy
   - § Oophorectomy

- Ovarian cystectomy

6. Repair of injuries of bladder and bowel
7. Exploration of the upper abdominal organ

MANDATORY ROTATION PERIODS DURING TRAINING PROGRAMME

The following rotation periods in related specialties/subspecialties have to be completed at the indicated training level.

Related Specialty/Subspecialty	Duration of Training Period	Training Level
Neonatal ICU	One Month	R2
Anesthesia	One Month	R2
Urology	One Month	R3 - R5
Pathology	One Month	R3 - R5
Surgical/General ICU	Two Months	R3 - R5
Gynaecological Oncology	Two Months	R3 - R5
Infertility	Two Months	R3 - R5
Perinatology/Fetal Medicine	Two Months	R3 - R5

Total : 12 Months

Elective in Neonatal I.C.U.

Duration of Elective	:	One Month
Level of Training	:	R2
Responsibility for the On-Call	:	Take 1:4 calls in the N.I.C.U.

Learning Objectives:

- Identify different antenatal problems that need to be discussed with neonatalogist before onset of labor.
- Identify criteria to assess the clinical condition of the new born by apgar score, as well as cardiorespiratory and C.N.S. phenomena. And list criteria for immediate pediatric consultation on special new born care.
- Demonstrate competence in initial resuscitation of the depressed new born, including mask ventilation, chest compressions, endotracheal intubation and aspiration, and commonly used medications used for immediate neonatal resuscitation.

Suggested Reading:

- Text book of neonatal resuscitation by the American Academy of Pediatrics. Author: Roland S. Bloom

Elective in Anaesthesia

Duration of Elective	:	One Month
Level of Training	:	R2
Responsibility for the On-Call	:	Take 1:4 calls at Anesthesia Department

Learning Objectives:

- Know the principles of general anesthesia: Agents, techniques, effect on fetus.
- Know the indications, contraindications and complications different anesthetic techniques.
- Securing and maintaining the airways, techniques to avoid aspiration in pregnant patient.
- Basics of invasive and none invasive monitoring.
- Basic and advanced life support.
- Regional anesthesia and peripheral nerve blocks.
- Pre-operative evaluation of the patient.

Suggested Reading:

Text book of Anesthesia

- Atkenhead & Smith
  Churchill – Livingstone 1996
- Clinical Anesthesiology, 2nd Edition
  Morgan & Mikhail
  Appleton & Lange 1996
- Anesthesia – Secrets

Elective in Urology

Duration of Elective	:	One Month
Level of Training	:	R3-5
Responsibility for the On-Call	:	Take 1:4 calls at Obs/Gyne department

Learning Objectives:

Section I: Urogynecology:

- Attend clinics, ward rounds, operating sessions.
- Be able to take reliable history from patient with urogynecology problem.
- Be able to do complete examination of a patient with urogynecology problem.
- Be able to understand anatomy and physiology of pelvic floor.
- Be able to define and understand the mechanisms of different types of urinary incontinence.
- Be able to understand basics and indications of urodynamics.
- Be able to reach a final diagnosis after complete work up of patient with urogynecology problem.
- Be able to know about different ways of conservative management of patient with urogynecology problem.
- Have complete understanding about medical management of patient with urogynecology problem.
- Learn to identify and initiate management of different urologic complications resulting from gynecological surgery e.g. Bladder injuries, Ureteric injuries etc…

Section II: Male Infertility

- Take reliable history from male patient with infertility problem.
- Do reliable examination of patient with male infertility.
- Understand anatomy, physiology, embryology related to patient with male infertility.
- Initiate appropriate work up and management of patient with male infertility.
- List norms of ejaculate parameters according to W.H.O. criteria.
- Be able to evaluate a patient with: Oligospermia, Asthenospermia, Azospermia.
- Indications of artificial insemination.
- Indications of epididymal aspiration (MESA).
- Indications of testicular biopsy (TESA).

Suggested Reading:

- Urodynamics by Paul Abrams – Spinger – Ver Lag.
- Gynecologic Urology and Urodynamics by Dr. R. Ostergard.
- Tilend's Operative Gynecology.
- Infertility evaluation and treatment by Keye and Chang.

Elective in Pathology

Duration of Elective	:	One Month
Level of Training	:	R3-5
Responsibility for the On-Call	:	Take 1:4 calls at Obs/Gyne Department

Learning Objectives:

- Learning clinical pathological correlations.
- Learn to unify line of thought of different clinical staging classifications between Gynecologist and Pathologist.
- Learning how to describe gross appearance of different specimens.
- Learning the basics of reading slides, of common diseases and differentiating normal from abnormal histology.
- Using clinical judgement since the pathologist is not always infallible.
- Learning the importance of providing some pertinent clinical information to the pathologist.

Suggested Reading:

- Blaustein's pathology of the female genital tract.
- Tumours of the ovaries and mal developed gonads, by Dr. Scully.

Elective in I.C.U. / S.I.C.U.

Duration of Elective	:	2 Months
Level of Training	:	R3-5
Responsibility for the On-Call	:	Take 1:4 calls at I.C.U. / S.I.C.U. Department

Learning Objectives:

- **v** Defining criteria to admit patients to I.C.U.
- **v** Be able to read E.C.G.
- **v** Be able to identify and manage disturbances in blood gas, fluid and electrolyte disturbances.
- **v** Identify indications to be on & off ventilator.
- **v** Be able to evaluate the hemodynamics status of the patient.
- **v** Initiate proper cardiopulmonary resuscitation.
- **v** Be able to manage patient with hemorrhagic shock.
- **v** Understands basics of invasive and non invasive monitoring.
- **v** Be able to manage patient with oliguria.

Suggested Reading:

- Physiology (Gannong)
- E.C.G.
  (How to quickly and accurately maintained E.C.G. Interpretation)
  Author: Dailed Devis
- I.C.U. (secrets)
- Hand book
  (Post operatively critical care of the Massachusettes General Hospital)
  Author: Hopeman and John Wasnik.
  Editor: Little Brown and Company.
- I.C.U. – Secrets

Elective in Gynecologic Oncology

Duration of Elective	:	Two Months
Level of Training	:	R3-5
Responsibility for the On-Call	:	Take 1:4 calls at Obs/Gyne Department

Learning Objectives:

- Carcinoma of the Breast:
  - Epidemiology of breast cancer
  - Invasive carcinoma of the breast
- Carcinoma of the Uterus:
  - Endometrial hyperplasia.
  - Carcinoma of the endometrium
  - Uterine sarcoma
- Cervical Diseases:
  - Preinvasive cervical disease
  - Invasive carcinoma of the cervix
- Ovarian and tubal carcinoma:
  - Germ cells and epithelial
  - Carcinoma of the fallopian tubes
- Vaginal and vulvar malignancies:
  - Preinvasive vulvar lesions
  - Invasive vulvar lesions
  - Carcinoma of the vagina
- Gestational trophoblastic disease:
  - Hydatidiform mole
  - Malignant gestational trophoblastic disease.
- Therapy:
  - Radiation therapy
  - Chemotherapy
  - Terminal care

End of Rotation Goals:

- Be aware of different screening measures of early detection of different gynecologic tumors.
- Able to assess a new referral to the oncologic clinic with a complete history and physical, plan pertinent investigations and suggests possible treatment plans.
- Able to provide appropriate follow up assessment for patients treated for their malignancies.
- Learn basic colposcopic assessment of CIN, VIN and VAIN.
- Manage inpatients recovering from surgery with complications related to their disease and treatment requiring palliative care.
- Be able to communicate with the referring physicians.
- Understand Gynecologic surgical principles, chemotherapy and radiotherapy.
- Understand presentations, spread patterns, assessment and treatment of Gynecologic malignancies.

Suggested Reading:

- Practical Gynecologic Oncology – Jonathan S. Berek and Neville F. Hacker
- Clinical Gynecologic Oncology – Disaia.
- Pathology of Female genital tract – Blaustein
- Telind's Operative Gynecology.
- Basic and advanced colposcopy – V. Cecil Wright

Elective in Infertility

Duration of Elective	:	2 Months
Level of Training	:	R3-5
Responsibility for the On-Call	:	Take 1:4 calls at Obs/Gyne Department

Learning Objectives:

- Have complete understanding of various endocrinological problems e.g. primary amenorrhea, secondary amenorrhea, hirsutism, galactorrhea, precocious puberty and ambigous genitalia.
- Have complete understanding about the process of puberty and ovulation, implantation.
- Be able to get reliable history and examination of patient with female infertility, trying to concentrate on disorders of ovulation, tubal factor, male factor.
- Be able to initiate relevant and cost effective work up and management plan of patient with female infertility.
- Discuss pharmacologic agents used in the induction of ovulation with respect to their indications: effects, costs, hazards.
- Be familiar with different ovulation induction protocols.
- Indications, techniques of artificial insemenation.
- Understand principles of endoscopic surgery.
- Understand principles of tubal microsurgery.
- Understand indications for I.V.F., GIFT, ICSI procedures.
- Understand the role of cryo preservation in assisted reproductive technology.
- Drawing line of ending further evaluation and treatment of certain cases: e.g. repeated failed attempts of I.V.F., arrest of spermatogenisis, congenital absence of the uterus.
- Read about Islamic views of different types of assisted reproductive techniques.

Suggested Reading:

- Speroff et al, clinical Gynecologic endocrinology and infertility.
- Infertility evaluation and treatment by Keye and Chang.
- Telind's operative Gynecology.
- Fertility and sterility, Journal of the American Fertility Society.
- Endoscopic surgery for Gynecologist, chris Swtton, Micheal Diamond.

Elective of Perinatology

Duration of Elective : 2 Months

Level of Training : R3-5

Responsibility for the On-Call : Take 1:4 calls in Obs/Gyne Department

Learning Objectives:

- Differentiate single from multiple pregnancy
- Differentiate the viable fetus from IUD.
- Confirm presentation, breech, vertex, transverse lie.
- Identify fundal placenta, and other placental locations.
- Identify normal, abnormal structural anatomy
- Be able to different fetal measurements to assess gestational age and fetal weight.
- Be able to differentiate normal fetal growth from IUGR and macrosomia.
- Recognize abnormalities of the amniotic fluid volume.
- Perform amniocentesis under supervision.
- Able to do fetal biophysical profile
- Able to adequately interpret different C.T.G. patterns.
- Observe intra uterine transfusions and chorionic villous sampling when applicable.
- At the end of rotation the resident should be able to do emergency scan and use it to make his/her management decision.

Suggested Reading:

- Ultrasonography in Obstetrics and Gynecology, Peter W. Callen
- The principles and practice of ultrasonography in Obstetrics and Gynecology, by Frank A. Manning, Roberto Romero and Arther C. Fleischer.
- Fetal Monitoring, Physiology and techniques of antenatal and intrapartum assessment, by John A.D. Spencer.

TABLE 1:

MANDATORY OPERATIVE OBSTETRICAL PROCEDURES FOR JUNIOR RESIDENCY YEARS

PROCEDURE	Number Required
a. Episiotomy and its repair	100
b. Repair of all degrees of perineal tear	10
c. Repair of cervical lacerations	5
d. Instrumental deliveries	40
e. Breech deliveries	15
f. Vaginal twin deliveries	10
g. Manual removal of placenta	10
h. Lower segment caesarian section	50

TABLE 2:

MANDATORY OPERATIVE GYNAECOLOGICAL PROCEDURES FOR JUNIOR RESIDENCY YEARS

PROCEDURE	Number Required
1. External Genitalia:	
- Local excisions and incisions, biopsies and Bartholin's cyst marsupilization	5
2. Internal Genitalia:	
- Cervical dilatation and fractional curettage	10
- Evacuation of retained product of conception	50
- Suction Curettage	10
- Cervical suture for incompetent cervix	10
- Insertion of IUCDs	10
- Cervical cautery	5
3. Abdomen:	
- Diagnostic laparoscopies	10
- Abdominal incisions (vertical transverse)	10
4. Fallopian tubes:	
- Salpingectomy - Segmental resection - Salpingostomy - Tubal ligation	10

TABLE 3

MANDATORY OPERATIVE PROCEDURES FOR SENIOR RESIDENCY YEARS

PROCEDURE	Number Required
1. External Genitalia:	
- Bartholin's gland excision	1
- Hymenal operations including imperforate hymen	2
- Perineorrhaphy and repair of old perineal lacerations	5
2. Vaginal operation and reconstruction for:	
- Septum	2
- Injuries	2
- Cystocele and rectocele	10
- Enterocele including abdominal repair, vaginal repair, and colpocleisis	1
- Vaginal cysts	1
3. Uterus and pelvis other than	
- Colposcopy and cervical biopsy	4
- Cervical cautery and cryosurgery	5
- Cervical conization	4
- Posterior colpotomy, including drainage of pelvic abscess	1
- Vaginal hysterectomy, with and without vaginal repairs	5
- Diagnostic Hysteroscopy	10
4. Uterus by transabdominal approach:	
- Abdominal hysterectomy, including supracervical and total	10
- Myomectomy	10
- Uterine suspension	1
5. Ovary:	
- Ovarian biopsy	5
- Oophorectomy	5
- Ovarian cystectomy	10
6. Repair of injuries of bladder and bowel	2
7. Exploration of the upper abdominal organ	5
8. Amniocentesis	3
9. Evacuation of perineal hematoma	2

SAUDI SPECIALITY CERTIFICATE IN
OBSTETRICS & GYNAECOLOGY
SSCOG

Basic Science Programme

ANATOMY

- Structure and Organs of female pelvis:
  - Vulva
  - Vagina
  - Uterus
  - Fallopian tubes
  - Ovaries
  - Female urological system
  - Levator-ani Muscles & Pelvic Diaphragm
  - The Pernicum
  - Peritonium and ligaments of the Pelvis
  - Blood supply to the Female Pelvis
  - Lymphatic Drainage of the Female Pelvis
  - Nerve Supply to the Female Pelvis
  - The Pelvic Skeleton

- The Fetal Skull

- The Anterior-Abdominal Wall

- The Breast

- The Endocrine Glands
  - Pituitary
  - Supra-Renal Glands

HISTOLOGY

Cell Structure:

- Mitosis
- Meiosis
- Gametogenesis "Female and Male"
- Ovary
- Fallopian Tubes
- Uterus
- Vulva
- Testes
- Breast
- Pituitary Gland
- Supra-Renal Gland
- Pancreas
- Blood Vessels
- Lymph Node

EMBRYOLOGY

- Fertilization
- Developmental of the Pre-Implantation Embryo
- Implantation
- Throphoblast Invasion
- Placental Development
- Development of Fetal Membranes
- Amniotic Fluid "Sources: Constitution and Circulation"
- Sex Differentiation
- Organogenesis

GENETICS

Chromosome Identification

- Banding
- Cytologic Properties of the X Chromosome
- Cytologic Properties of the Y Chromosome
- Cytogenetic Nomenclature
- Chromosomal Analysis

State of DNA in the Chromosomes

- Type of DNA
- Organization of DNA

Mitochondrial DNA

- Cell Division
  - Mitosis
  - Meiosis

Numericals Chromosomal Abnormalities

- Cytologic Origin
- Causes
- Transmission

Incidence of Chromosomal Abnormalities

- First Trimester Fetal Losses
- Second Trimester Fetal Losses
- Still Born Infants
- Live Born Infants

Mendelian Inheritance

- Definition
- Molecular Genetics
- DNA as Hereditary Information
- Structural Organization of the Gene
- Post Transcriptional Events
- Translation
- Transporting Proteins to their Proper Cellular Location

Transmission of Mutant Genes in Families

- Autosomal Dominant Inheritance
- Autosomal Recessive Inheritance
- X-Linked Recessive Inheritance
- X-Linked Dominant Inheritance
- Y-Linked Inheritance

Causes Of Gene Mutation

- Linkage
- Localizing Gene to Specific Chromosomes
- Molecular Genetics in Prenatal Diagnosis
  - Diagnostic Approaches
  - DNA Sequencing
  - Oncogenes
- Polygenic/Multifactorial Inheritance
- Basis of Polygenic Inheritance
- Characteristic of Polygenic/Multifactorial Inheritance

Genetic Factors In Tetratogenesis

- Specificity of Agent
  - Dosage
- Stage of Embryonic Development
- Genetic Background
- Confounding Factors
- Cellular Action of Teratogen
- Proof of a Human Teratogen

Common Genetic Counselling Cases

- Maternal Age and Amniocentesis
- Down Syndrome in Relatives
- Autosomal Dominant Disorders
- Autosomal Dominant Disorder of Adult Onset
- Autosomal Recessive Disorder
- X-Linked Recessive Disorders
- NeuroTubal Defect
- Recurrent Polygenic/Multifactorial Traits
- X-Ray Exposure During Pregnancy

PHARMACOLOGY

General Principles of Drug Actions

- Absorption
- Distribution
- Biotransformation
- Excretion
- Drug Receptors Interaction
- Pharmacokinetics
- Drug Interaction

Sedatives & Hypnotics

- Benzodiazipine
- Barbiturates

Analgesics

- Narcotics
- Non-Narcotics

Drugs used in Cardiovascular & Hypertensive Disease

- Anti-Hypertensive
- Diuretics

Drugs That Affect Uterine Motality

- Ergot Alkaloids
- Erytocine
- Prostaglandins
- Tocolytics

Anti-Microbial Agents

- Sulphonamides
- Penicillins & Related Compounds
- Aminoglysides
- Quinolones
- Erythromycin & Related Compounds
- Antifungal & Antiprotozoan Drugs

Anti-Neoplastic Drugs

- Alkalyting Agent
- Antimetabolities
- Antibiotics
- Vienca Alkaloids
- Miscellaneous Drugs
- Hormones and Hormones Antagonist

Anti-Psychiatric & Anti-Depressive Agent

- Antihistamine
- Antacids
- Laxatives
- Anti-emetic Agents
- Drugs Affecting Blood Coagulation
- Local & General Anesthetic Agents

Therapeutic Principles

- Prescription Order Writing
- Patient Complaints
- Over the Counter Drugs
- Major Teratogenic Drugs

PHYSIOLOGY
Cell Biology
Cell Cycle Kinetics
Fluid and electrolyte balance
Acid-base Balance
Neurotransmission
Muscle Contraction
Autonomic Nervous System
Blood and Lymph
Hemostasis
Cardiac Function
GIT & Respiratory System

PLACENTAL FUNCTION:
Endocrinology
Enzymes
Transfer mechanisms

FETAL PHYSIOLOGY:
Growth
Endocrinology
Circulation
Acid/balance

PARTURITION:
Myometial contractility
Changes in cervix
- Physical
- Chemical

Initiation of normal labor
Neonatal physiology
Puerperium
Lactation
Urinary control mechanisms
Fecal control mechanisms
Hydrodynamics of Lower Urinary Tract
Effects of Urinary Tract:
Pregnancy
Parturition
Aging

ENDOCRINOLOGY

Hormones and humoral agents:

- Definition
- Regulation
- Structure
- Synthesis
- Storage
- Release
- Transport
- Distribution
- Metabolism
- Structure-activity Relationships
- Site of Action
- Receptor Dynamics
- Intracellular Second Massengers
- Mode of Action
- Excretion

Clinical Aspects:

- Deficiency of Hormones
- Excessive Production of Hormones
- Pharmacology
- Interactions
- Teratogenecity
- Oncogenesis

Reproductive Endocrinology:

- Biochemical Basis of
- Neuroendocrine interaction
- Endorphins
- Melanocyte Stimulating Hormones
- Oxytocin
- Arginine Vasopressin
- Neurophysins
- Agonists & Antagonists of Pituitary Hormones
- Synthesis & Secretion of Gonadal Hormones
- Relaxin
- Sex Hormone Binding Globulin
- Clinical Assessment of Androgen Activity

Thyroid:

- TRH-TSH-Thyroid physiology
- Clinical Assessment of Thyroid Function
- Thyroid Hormones, Total and Free
- Thyroid Stimulating Immunoglobulins
- Effects Upon Menstruation and Fertility
- Physiology during Pregnancy
- Fetal Effects of Altered Maternal Thyroid Function
- Fetal Effects of Maternal Therapy
- Physiology in the Newborn

Ectopic Production of Thyroid Hormones

Adrenal:
- Clinical Assessment of Adrenal Function
- Regulation and Secretion of Adrenocortical Hormones
- Congenital Adrenal Hyperplasia
- Aldosterone & the Renin-angiotensin System
- Catecholamines

Pancreas:
- Insulin
- Glucagon

Interpretation of laboratory data

REPRODUCTIVE

Hypothalamo-pituitary-gonadal relationships
Puberty:
Growth
Endocrinology
Development of secondary sexual characteristics
Gonadal Function
Behavioral Changes
Ovarian Follicular Development
Ovulation
Corpus Luteum before and during pregnancy
Age-related changes in ovarian function
Regulation of the menstrual cycle
Endometrial physiology
Climacteric
Spermatogenesis
Function of male reproductive tract
Coitus
Conception
Maternal adaptation to pregnancy:
All major physiological systems
Endocrine
Nutritional

BIOCHEMISTRY

Metabolism of:
Carbohydrate, Protein, Bilirubin,
Lipid, Nucleid Acid

Minerals:
- Nutritional Importance
- Deficiency States

Fluids:
- Extracellular Composition
- Intracellular Regulation

Steroids:
- Synthesis
- Metabolism

Hemoglobin:
- Structure
- Normal Variants
- Abnormalities
- Function

Surfactant:
- Composition
- Synthesis
- Secretion

Interpretation of Laboratory Investigations:
- Fluid Balance
- Renal Function
- Acid-Base Balance
- Liver Function
- Carbohydrate Tolerance
- Coagulation Profile

PATHOLOGY

- General Principles: Responses at Whole Body, System, Tissue and Cellular Levels

  - Response to Trauma
  - Infection
  - Inflammation
  - Therapeutic Intervention:
    - Irradiation
    - Cytotoxic Drugs
    - Hormones
  - Disturbances of Blood Flow
  - Loss of Body Fluids
  - Neoplasia
  - Tumor Markers

- Related Systems

  Pituitary:
  - Tumors
  - Infarction

Ovary:
- Follicular Cycle
- Non-neoplastic Cysts
- Epithelial Tumors
- Sex-Cord Stromal Tumors
- Germ Cell Tumors
- Tumors of non-specialized Tissues
- Miscellaneous unclassified Tumors
- Metastatic Tumors

Genital Tract:
- Malformations
- Hormonal Influences
- Menstrual Disorders
- Histology of Normal and Abnormal Endometrium
- Postmenopausal Changes
- Inflammation and Infection
- Metaplasia and Heterotopia
- Benign Neoplasms
- Epithelial Abnormalities
- Premalignant Epithelial Disorders
- Malignant Neoplasms
- Effects of Systematic Disease

Urinary Tract:
- Inflammation and Infection
- Effects of other Pelvic Pathology
- Effects of Pelvic Surgery
- Effects of Radiotherapy
- Effects of Neurological Disorders

MICROBIOLOGY

Principles of Infection Control
Methods of Preventing Infection
Commonly Encountered Parasites, Fungi, Protozoa, Bacteria (Aerobic and Anaerobic), and
Viruses:
- Characteristics
- Pathologic Effects
- Toxins
- Isolation
- Eradication
- Prevention

IMMUNOLOGY

Basic Information:

- Immune Responses
  - Primary
  - Secondary
- Mechanisms of Antibody Production
- Antibodies
  - Polyclonal
  - Monoclonal
- Classes of Immunoglobulins
  - Structure
  - Origin
  - Functions
- Cell Surface Antigens
  - Major Histocompatibility Antigens
  - Human Leukocyte Antigen System
- Antigen Presenting Cells
- Lymphocytes
  - T
  - B
  - Helper
  - Suppressor

Immune Mechanisms:

- Cell-Mediated
- Humorally Mediated

Graft-Host Interactions:

- Graft Rejection
- Graft Versus Host Disease
- The Fetus as Allograft

Immunization:

- Active
- Passive

Immunosuppression

Immunological Surveillance

BIOPHYSICS

Physical Principles and Biological Effects of:

- Laser
- Radiation
- Isotopes
- X-rays
- Ultrasound
- Magnetic Resonance Imaging

RESEARCH METHODS

Population Parameters
Sampling Techniques
Cohort Studies
Case Control Studies
Cumulative Rate Calculation
Assessment of Bias
Comparison of Means and Variation
Experimental Design:
- Hypothesis Testing
- Sampling
- Randomization
- Blinding
- Controls
- Placebo
- Data Organization
- Data Analysis
- Significance of Results
- Inferences

Statistical Tests:
- Parameteric
- Non-Parameteric
- Correlation
- Regression
- Analysis of Variance
- Life Table Analysis

Interpretation:
- Significance
- Confidence Intervals
- Sensitivity
- Specificity
- Positive Predictive Value
- Negative Predictive Value

Quality Control
Collaboration to Biostatisticians

SAUDI SPECIALITY CERTIFICATE IN
OBSTETRICS & GYNAECOLOGY
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Syllabus for the Ob/Gyn Junior Residency Years

v OBSTETRICS

- PRE-NATAL CARE
- MANAGEMENT OF INTRUTERINE GROWTH RESTRICTION
- DIAGNOSIS AND MANAGEMENT OF PREMATURE RUPTURE OF THE MEMBRANES
- DIAGNOSIS AND MANAGEMENT OF PRETERM LABOR
- ANTENATAL AND INTRAPARTUM MANAGEMENT OF MULTIPLE PREGNANCIES
- MANAGEMENT OF INTRAUTERINE FETAL DEATH
- ISOIMMUNIZATION AND MANAGEMENT OF ISOIMMUNIZED PREGNANCIES
- INDUCTION OF LABOR (INDICATION AND MANAGEMENT)
- ABNORMAL LABOR AND ITS MANAGEMENT
- ANTEPARTUM AND INTRAPARTUM FETAL MONITORING AND MANAGEMENT OF ITS ABNORMALITIES
- MANAGEMENT OF ACUTE OBSTETRICAL EMERGENCIES
- TECHNIQUES AND INDICATIONS OF SOME OBSTETRIC PROCEDURES
- LABOR AND DELIVERY
- MANAGEMENT OF THIRD STAGE OF LABOR AND ITS COMPLICATIONS
- INDICATIONS, COMPLICATIONS AND CONTRAINDICATIONS OF INSTRUMENTAL DELIVERIES
- INDICATIONS AND COMPLICATIONS OF CESAREAN SECTION
- PUERPERIUM
- PUERPERAL MORBIDITY
- LACTATION AND ITS SUPPRESSION
- IMPLEMENTATION OF FAMILY PLANNING METHODS
- CONTRACEPTION
- STERILIZATION
- RESUSCITATION OF THE NEWBORN
- BASIC ULTRASOUND IN OBSTETRICS
- DIAGNOSIS AND MANAGEMENT OF ALL TYPES OF BLEEDING IN OBSTETRIC PRACTICE
- ABORTION AND ECTOPIC PREGNANCY
- LATE PREGNANCY BLEEDING
- MEDICAL AND SURGICAL CONDITIONS COMPLICATING PREGNANCY
- OBSTETRIC ANALGESIA, ANESTHESIA AND THEIR EFFECTS ON THE MOTHER AND FETUS

v GYNAECOLOGY

- DIAGNOSIS AND MANAGEMENT OF AMENORRHEA
- DIAGNOSIS AND MANAGEMENT OF FIBROID
- DIAGNOSIS AND MANAGEMENT OF INFERTILITY IN GENERAL
- DIAGNOSIS AND MANAGEMENT OF GESTATIONAL TROPHOBLASTIC NEOPLASIA
- DIAGNOSIS AND MANAGEMENT OF VULVAL AND VAGINAL INFECTIONS
- DIAGNOSIS AND MANAGEMENT OF PELVIC INFLAMMATORY DISEASES
- DIAGNOSIS AND MANAGEMENT OF URINARY TRACT INFECTIONS
- DIAGNOSIS AND TREATMENT OF DYSMENORRHEA
- ABNORMAL MENSTRUATION
- SURGICAL/TECHNICAL CAPABILITIES FOR JUNIOR RESIDENTS

PRE-NATAL CARE

Terminal Objective:

Given a patient in the first trimester of pregnancy, the resident should be able to obtain an appropriate history; perform a complete physical examination, including pelvic measurements; obtain appropriate laboratory data; assess the current status of the patient; anticipate potential problems; counsel the patient concerning nutrition, hygiene, danger signs in pregnancy, the current status, and potential problems, and administer continuing comprehensive antepartum care.

Enabling Objectives:

1. State the elements of history useful in assessing the current pregnancy.
2. Recognize the significant deviations from normal in the physical examination.
3. State the important aspects of clinical pelvimetry and the ranges of normal values.
4. Demonstrate skill in the evaluation of uterine size, measurement of fetal growth, and determination of fetal position and presentation.
5. List the important laboratory data that state the cost of each test, and state the normal values of pregnancy.
6. Discuss the interpretation of rubella antibody titers and the use rubella vaccine in women of reproductive stage.
7. List the factors that place a gravida in the high-risk category.
8. Discuss hygiene, use of antiemetics, and the pharmacology of vitamin and mineral supplementation in pregnancy.
9. Discuss nutrition and develop an inexpensive, appealing diet for disadvantaged patients.
10. State the important factors to be assessed at each prenatal visit.
11. Demonstrate through conduct and patient records the attitude that an important part of prenatal care is preventive medicine.
12. Advise the patient regarding programs that prepare her for childbirth and infant feeding.

MANAGEMENT OF INTRAUTERINE GROWTH RESTRICTION

Terminal Objective:

Given a gravida in the third trimester of pregnancy with a uterus significantly smaller than expected, the resident should be able to evaluate the possibility of intrauterine growth retardation and institute an appropriate plan of management.

Enabling Objectives:

1. List the causes of fetal growth retardation, and discuss the mechanism of each.
2. Outline the ultrasound criteria for determination of fetal age and diagnosis of growth retardation.
3. Distinguish between symmetric and asymmetric forms of fetal growth retardation with respect to antenatal and postnatal diagnosis and prognosis.
4. Outline a protocol for assessment of the growth-retarded fetus prior to and during labor.
5. List the special risks of growth-retarded neonates, and compare their prognosis with that of normal infants of similar gestational age.
6. Demonstrate competence in estimating gestational age by physical examination of the newborn.

DIAGNOSIS AND MANAGEMENT OF PREMATURE RUPTURE OF THE MEMBRANES

Terminal Objective:

Given a pregnant patient with vaginal fluid leakage, the resident should be able to perform the procedures necessary to make a diagnosis, describe the potential complications for mother and fetus, and develop and conduct a management plan based on existing conditions and anticipated complications.

Enabling Objectives:

1. List the common microorganisms associated with amnionitis, and describe their routes of entry and their effects on mother and fetus.
2. List common obstetric complications that occur with premature rupture of the membranes.
3. Discuss the impact of socioeconomic status on outcome.
4. Discuss the theoretical basis for the use of antepartum glucocorticoid therapy, indications, contraindications, and hazards.
5. Discuss the place of antepartum antibiotics cover and it's place in the management of premature rupture of membranes
6. Design and conduct a management plan that is based on such factors as duration of pregnancy, presence of infection, and probability of fetal survival in view of existing clinical conditions and available facilities.
7. Discuss the neonatal nursery capabilities required to maximize survival, and describe the appropriate therapeutic plan in terms of available neonatal nursery facilities.

DIAGNOSIS AND MANAGEMENT OF PRETERM LABOR

Terminal Objective:

Given a patient with painful recurrent uterine contractions in the 32nd week of gestation, the resident should be able to perform the diagnostic procedures to determine if the patient is in preterm labor, list the precipitating causes, describe the pathophysiology of each, and develop and carry out a plan of management.

Enabling Objectives:

1. Define preterm labor.
2. Outline the diagnostic procedures used to differentiate preterm birth from intrauterine growth retardation at term.
3. List and describe the diagnostic procedures that provide the information necessary to decide whether to inhibit uterine contractions.
4. List the available tocolytic agents, discuss the mechanisms of action of each agent, describe their beneficial and adverse pharmacologic actions, and integrate them into a treatment plan, if appropriate.
5. List the potential dangers of labor to the fetus, and outline a therapeutic program to provide maximal protection to the fetus during labor and to the newborn at delivery.
6. Under therapeutic program, contribute to the selection of analgesia and successfully induce analgesis in the patient; determine the choice of the appropriate method of anesthesia for delivery.
7. Describe the perinatal mortality and disability resulting from premature birth; discuss with the mother prognosis for future pregnancy.
8. Discuss the special hazards of breech presentation with preterm labor.
9. Discuss the advantages and disadvantages to mother and fetus of regionalization of perinatal care.

ANTENATAL AND INTRAPARTUM MANAGEMENT OF MULTIPLE PREGNANCIES

Terminal Objective:

Given a patient 20 weeks pregnancy with a larger than expected uterus and a history of twins in the family, the resident should demonstrate an understanding of the genetics and embryology of multiple pregnancy, explain its effects on the mother and fetus, and outline and carry out a plan for managing pregnancy, labor and delivery in a way that minimizes maternal and perinatal mortality and morbidity.

Enabling Objectives:

1. Describe the differential diagnosis of multiple pregnancy during each trimester.
2. List the embryologic, genetic and iatrogenic causes of multiple pregnancy.
3. Diagram the types of multiple pregnancy by membrane configuration, and describe the embryologic background of each.
4. Describe the effects of multiple pregnancy on maternal physiologic functions and on the growth and development of the fetuses.
5. Discuss the use of ultrasound in the management of multiple pregnancy.
6. List factors responsible for the increased risk of perinatal mortality associated with multiple pregnancy and techniques designed to minimize this risk.

MANAGEMENT OF INTRAUTERINE FETAL DEATH

Terminal Objective:

The resident should demonstrate knowledge of diagnosis and management of intrauterine fetal death.

Enabling Objectives:

1. Define the intrauterine fetal death.
2. List the common causes of fetal death.
3. Outline a list of investigations to determine the causes of the intrauterine fetal death.
4. Develop a plan of management of intrauterine fetal death.
5. Set-up recommendation for next pregnancy to improve the outcome.
6. Discuss the best approach to help patient to cope with the problems.

MANAGEMENT OF ISOIMMUNIZED PREGNANCIES

Terminal Objective:

Given a multiparous patient, who is currently pregnant and whose last two fetuses died of erythroblastosis fetalis, the resident should be able to outline a plan of management for this pregnancy.

Enabling Objectives:

1. Explain to the patient the cause and planned management of Rh disease.
2. Describe the pathophysiology of Rh-hemolytic disease and other blood group isoimmunization, comparing the diagnostic and therapeutic implications of sensitization of D(Rho), minor Rh antigens, ABO antigens, and other minor antigens.
3. Describe the significance of Rh antibody titers.
4. Describe the indications for amniocentesis.
5. Perform amniocentesis, and describe complications and their management.
6. Describe the role of direct fetal blood sampling in the condition.
7. Use Rh antibody titer, amniocentesis, and direct fetal blood sampling results to formulate a management plan.
8. Describe the fetal and neonatal metabolism of bilirubin, including:
    i. Tissue and serum binding
    ii. Conjugation
    iii. Excretion
9. Discuss the pathophysiology of the fetus and neonate with isoimmunization.
10. Discuss the metabolism by which Rh-immune globulin prevents Rh isoimmunization, and outline indications for its use in:
    i. Abortion and ectopic pregnancy
    ii. The antepartum period
    iii. The postpartum period

INDUCTION OF LABOR (INDICATION AND MANAGEMENT)

Terminal Objective:

Given a patient in whom induction of labor may be indicated, the resident should be able to make the appropriate decision and manage the induction process.

Enabling Objectives:

1. Define induction of labor, and differentiate it from augmentation of labor.
2. List the indications and contraindications for induction of labor and the steps needed to prevent iatrogenic premature delivery.
3. List the possible maternal and fetal complications of labor induction, describe how each be prevented, and describe the management of each.
4. Describe in detail the methods and agents by which labor can be induced, including the indications, contraindications and possible complications associated with each.
5. Demonstrate ability to select patients and induce labor.

ABNORMAL LABOR AND ITS MANAGEMENT

Terminal Objective:

Given a patient whose history, physical examination, or clinical course suggests actual or potential labor abnormalities, the resident should be able to identify the data base necessary for decision making, outline a plan of management, and demonstrate the skills necessary to carry out the plan.

Enabling Objectives:

1. Define abnormal labor, list its specific causes, and describe the natural history of labor associated with each cause.
2. List the abnormal findings associated with each cause of abnormal labor, and demonstrate ability to make the appropriate observations.
3. Demonstrate the ability to use radiologic and other objective examinations in assessing problems of abnormal labor, and discuss the uses of the specific information these examinations provide.
4. List the maternal and fetal effects of abnormal labor.
5. Demonstrate ability to predict labor outcome for each type of labor abnormality, and integrate the prediction into a management plan.
6. List and define indications and contraindications for a trial of labor, including specific indications for termination or continuance of the trial of labor.
7. Describe the use of labor graphs in monitoring patients during labor.
8. Provide classic definitions of labor curve abnormalities arrest of dilatation, arrest of descent, protracted active phase, prolonged latent phase.
9. List indications for and contraindications to amniotomy.
10. Discuss the clinical pharmacology of useful oxytocic agents, including dosage and adverse effects.
11. List the complications of delivery in the presence of abnormal labor, and outline a plan preventing and managing each complication.
12. Define shoulder dystocia, and discuss its prediction and management.
13. Compare brow and face presentation of satisfactory vaginal delivery, given a normal labor.
14. Discuss the special implications of breech presentation and the role of caesarean section.
15. Demonstrate ability to diagnose and manage transverse and oblique lie.

ANTEPARTUM AND INTRAPARTUM FETAL MONITORING AND MANAGEMENT OF ITS ABNORMALITIES

Terminal Objective:

Given a patient in labor at term with a fetus whose heart rate varies from 140 to 80 beats/minute, the resident should be able to describe the kinds of alterations that may occur during labor, list the causes of abnormal heart rate patterns, outline a plan of management for each use, and demonstrate ability to use external and internal fetal monitoring techniques.

Enabling Objectives:

1. Describe the physiologic mechanisms that control fetoplacental circulation and fetal oxygenation:
    i. Cardiac output
    ii. Umbilical blood flow
    iii. Hemoglobin-oxygen affinity
    iv. Hemoglobin-oxygen concentration
    v. Fetal circulatory pattern
    vi. Fetal cerebral oxygen consumption
    vii. PO2 gradient
    viii. Determinants of gradient
    ix. Placental diffusion capacity for oxygen
    x. Concurrent flow system
    xi. Uneven placental perfusion
    xii. Shunting
2. Describe the conditions that alter the fetal heart rate and the pathophysiologic mechanisms by which the changes occur.
3. Describe the chemical changes associated with abnormal fetal cardiovascular function, discuss the clinical methods of sampling fetal blood, and discuss the relative predictive value of fetal heart rate monitoring and fetal blood sampling in the management of labor and delivery.
4. Define the normal maternal and fetal acid-base values in pregnancy before and during labor.
5. Describe acid-base exchange across the placenta.
6. Describe acid-base changes during fetal hypoxia, and discuss the mechanisms for these changes.
7. Install intrauterine pressure catheter and direct fetal ECG lead, and interpret the results.
8. Discuss the significance of meconium-stained amniotic fluid with and without other possible signs of fetal distress, and describe preventive management of the newborn.
9. Discuss the various positive and negative effects of electronic fetal monitoring on the emotional status of the patient.

MANAGEMENT OF ACUTE OBSTETRICAL EMERGENCIES

Terminal Objective:

Given a patient with one of the obstetric life threatening emergencies the resident should be familiar with life supporting measures including cardiopulmonary resuscitation.

Enabling Objectives:

i. Recognize the obstetrical life threatening disorders.
ii. Demonstrate ability to initiate promptly life supporting measures.
iii. Outline and carry out a plan of treatment of each condition.

TECHNIQUES AND INDICATIONS OF SOME OBSTETRIC PROCEDURES

Terminal Objective:

The resident should be able to describe and/or perform each of the following operative techniques:

1. Episiotomy and its repair.
2. Repair of all degrees of perineal tear.
3. Repair of vaginal and cervical laceration.
4. Instrumental deliveries.
5. Breech deliveries.
6. Vaginal twin deliveries.
7. Manual removal of placenta.
8. Lower segment C/S.

Enabling Objectives:

1. Describe each procedure.
2. List the indications for each.
3. List the immediate and remote complications of each procedure.

LABOR AND DELIVERY

Terminal Objective:

Given a patient near term with regular uterine contractions, the resident should be able to manage labor and delivery successfully.

Enabling Objectives:

1. Demonstrate skill in evaluating and integrating clinical and laboratory data from the prenatal record with current examination data to plan the conduct of labor and delivery, as well as skill in communicating this plan to the patient and her family.
2. Follow progress in labor by clinical examination, and record labor progress accurately.
3. Indicate the fetal signals leading to parturition, the steroid-prostaglandin interrelationships associated with parturition, and the effects of contractions on uteroplacental circulation.
4. List techniques for assessing fetal well-being during labor, and apply fetal monitorign techniques, identifying the relationship of fetal heart rate changes to uterine contraction patterns and progress in labor.
5. Discuss obstetric mechanism (e.g. breech, occiput posterior, face presentations) and the stress of the delivery process on maternal tissues (e.g. levator ani, urogenital diaphragm, endopelvic fascia).
6. Select and effectively use analgesic and anesthetic agents, and compare the relative indications and contraindication of these agents grouped by mechanism of action.
7. Skillfully conduct normal delivery; use of oxytocic drugs and manage the third stage of labor appropriately.
8. Identify criteria to assess the clinical conditions of the newborn by apgar score, as well as cardiorespiratory and CNS phenomena, and list criteria for immediate pediatric consultation or special newborn care.
9. Demonstrate competence in resuscitation of the depressed newborn, including endotracheal intubation and aspiration, respiratory support, cardiac resuscitation, and correction of acidosis.
10. Coordinate the medical care team for effective patient care. Demonstrate thoughtful concern for fetal integrity and maternal knowledge and comfort, as well as safety for both during parturition, with an awareness of family-centered obstetric care as a means of achieving these ends.

MANAGEMENT OF THIRD STAGE OF LABOR AND ITS COMPLICATIONS

Terminal Objective:

Given a patient who has just been delivered by forceps extraction of an infant weighing 4,800 g. and is bleeding excessively, the resident should be able to manage the third stage of labor and treat postpartum hemorrhage.

Enabling Objectives:

1. Define postpartum hemorrhage.
2. List in order of probability the cases of excessive bleeding and shock in the postpartum patient.
3. Outline a step-by-step approach to determine the cause of postpartum hemorrhage.
4. Describe the management of each cause of postpartum hemorrhage.
5. List the possible immediate and remote complications, and describe the management of each.
6. Outline methods for prevention of each cause of postpartum hemorrhage.
7. Outline the management of the patient in shock as a result of postpartum hemorrhage.

INDICATIONS, COMPLICATIONS AND CONTRAINDICATIONS OF INSTRUMENTAL DELIVERIES

Terminal Objective:

Given a 24-year-old who is gravida 2, para 1, at term, and who has been fully dilated with presenting part in vertex, right occipito transverse position for 110 minutes, first stage of 6 ½ hours, the membranes ruptured 4 hours prior to onset of labor, collect the data base appropriate to consider employing obstetric forceps for delivery.

Enabling Objectives:

1. Describe commonly used obstetrics forceps and vacuum extraction, with the special indications and contraindications for the use of each.
2. List the necessary requirements for forceps delivery.
3. Define mid and low forceps delivery and the indications and contraindications for each.
4. Discuss the advantages, disadvantages and complications of regional and general anesthetic techniques for instrumental delivery.
5. List the possible maternal and fetal complications of instrumental delivery, and describe the prevention of each.
6. Perform low and mid forceps delivery, mid forceps rotation, and forceps application to the after-coming head.

INDICATIONS AND COMPLICATIONS OF CAESAREAN SECTION

Terminal Objective:

Given the patient described previously, collect the date base required to justify cesarean delivery and implement management satisfactory.

Enabling Objectives:

1. List and describe the different surgical techniques of cesarean delivery, including the indications and contraindications of each.
2. List the maternal and fetal indications for cesarean delivery, and explain why cesarean delivery may be preferable for each.
3. List the immediate and remote complications of cesarean delivery for mother and infant, and describe how each can be prevented.
4. Contrast classical with lower segment cesarean delivery in respect to indications, operating time, postoperative discomfort, incidence of spontaneous uterine rupture in subsequent pregnancy, and hazard to mother and infant associated with rupture.
5. Discuss the reasons for the increasing relative incidence of cesarean delivery and the implications for maternal health, newborn health, and the cost of obstetric care.
6. List the indications for cesarean hysterectomy and discuss the complications of the procedure.
7. Discuss vaginal delivery following previous cesarean delivery, including indications, contraindications, and immediate and remote complications for mother and infant.
8. List the advantages, disadvantages, and complications of regional and general anesthesia for abdominal delivery.

PUERPERIUM

Terminal Objective:

Given a patient who has recently delivered vaginally at term, the resident should demonstrate skill in monitoring the normal recovery process, including recognition, evaluation and management of problems of the puerperium.

Enabling Objectives:

Describe the recovery from the physiologic changes of pregnancy and deliver and the restoration of the normal non-pregnant state in the reproductive tract, the urinary tract, skin, metabolic system, and endocrine system.

PUERPERAL MORBIDITY

Terminal Objective (I):

Given a patient with postpartum fever, the resident should be able to list possible causes, make an accurate diagnosis, describe the pathophysiology, outline a plan of management, and institute appropriate treatment for:

1. Urinary tract infection
2. Endometritis and endomyometritis
3. Septic pelvic thrombophlebitis
4. Wound or episiotomy infection
5. Mastitis
6. Septic shock

Enabling Objectives (I):

1. Determine the location, degree and extent of puerperal infection by examination and appropriate tests.
2. List the bacteria commonly found in such an infection, and describe and contrast the clinical responses according to the pathophysiology produced by each.
3. Demonstrate methods of obtaining material for examination and culture of aerobic and anaerobic bacteria.
4. List the epidemiologic determinants and the preventive measures for each.
5. Describe the pharmacology of antibiotics or other drugs that may be used to treat such an infection.
6. Outline and carry out a plan of treatment.
7. List the factors that may result in failure to respond initial therapy, and carry out appropriate treatment for each.

Terminal Objective (II):

Given a patient 7 days postpartum whose left calf becomes tender, the resident should be able to define the possible causes, outline steps leading to accurate diagnosis, and describe a management plan for initial and long-term treatment.

Enabling Objectives (II):

1. Discuss the factors in pregnancy and the puerperium that increase the incidence of thrombophlebitis.
2. Discuss methods of diagnosing thrombophlebitis and determining the extent of the disease.
3. Outline methods of diagnosis and prevention of pulmonary embolism.
4. Outline the emergency treatment of pulmonary embolism.
5. Discuss anticoagulant therapy, its indications, complications and dosage regimens.
6. List surgical procedures for treatment of embolic disease, their indications, and their complications.

LACTATION AND ITS SUPPRESSION

Terminal Objective:

Given a patient who desires to breast-feed her newborn, the resident should be able to provide adequate support and manage the common problems of lactation.

Enabling Objectives:

1. List the factors important in the initiation of lactation.
2. List agents that may suppress lactation, and discuss the mechanisms of action and complications of each.
3. Describe breast milk composition and its immunologic role.
4. Discuss the role of emotional factors in successful nursing.
5. Discuss the effect of lactation on menstrual interval and ovulation and the contraceptive implications of nursing.

IMPLEMENTATION OF FAMILY PLANNING METHODS

I. CONTRACEPTION

Terminal Objective:

The resident should be able to provide information on which patients can base a contraceptive choice; for example, given three sexually active women, one 6 months postpartum and lactating, another 45 years old and menstruating irregularly, and another 18 years old and menstruating normally, a resident should be able to make recommendations and provide a rationale for each.

Enabling Objectives:

1. Demonstrate ability to integrate physician recommendation and patient desires in making a contraceptive choice.
2. Educate the patient, and prescribe, fit, or insert the form of contraceptive selected.
3. Discuss the physiologic or pharmacologic basis for the various forms of contraception.
4. Discuss the statistical evaluation of the effectiveness of contraception including comparative data.
5. List the indications, as well as the absolute and relative contraindications of the various forms of contraception.
6. List the advantages, disadvantages, side effects and complications of forms of contraception.
7. Describe the format and content of the sexual history necessary for appropriate contraceptive choice.
8. Describe the influence of personality type on contraception choice.
9. Discuss the physiologic and pharmacologic basis for new methods of reversible contraception now being evaluated clinically.

II. STERILIZATION

Terminal Objective:

Residents should provide the recommendation, rationale, and patient education needed for sterilization procedure when required within the framework of our Islamic teachings.

Enabling Objectives:

1. Contrast tubal sterilization by laparotomy, laparoscopy and colpotomy with respect to:
    i. Indications
    ii. Contraindications
    iii. Advantages and disadvantages
    iv. Effectiveness
    v. Hazards and complications
2. Carry out preoperative, operative, and postoperative care corresponding to each of the approaches.
3. Define the indications for offering surgical sterilization to patients.
4. List common bases for ambivalence in women who request sterilization.
5. Demonstrate the capacity to write an adequate preoperative note, indicating that the surgical risks and the possibility of failure or irreversibility have been discussed, and that the patient understands and consents.

RESUSCITATION OF THE NEWBORN

Terminal Objective:

Given a patient delivered a depress newborn. The resident should be familiar with newborn resuscitation.

Enabling Objectives:

1. Identify criteria to assess the clinical condition of the newborn by apgar score, as well as cardiorespiratory and CNS phenomena, and list criteria for immediate pediatric consultation or special newborn care.
2. Demonstrate competence in resuscitation of the depressed newborn, including endotracheal intubation and aspiration, respiratory support, cardiac resuscitation, and correction of acidosis.

BASIC ULTRASOUND IN OBSTETRICS

Terminal Objective:

Given an unbooked patient in labor in late second or third trimester, resident should be able to perform basic ultrasound scan examination.

Enabling Objectives:

1. Identify number of fetuses in utero.
2. Confirm viability.
3. Identify the lie and presentation of the fetus.
4. Localize placental site.
5. Evaluate amount of liquor.

DIAGNOSIS AND MANAGEMENT OF ALL TYPES OF BLEEDING IN OBSTETRIC PRACTICE

ABORTION AND ECTOPIC PREGNANCY

Terminal Objective:

Given a young patient with a history of 2 month's amenorrhea, pelvic pain, and vaginal bleeding, the resident should be able to list the possible causes of the symptoms, develop diagnostic criteria for each condition, develop a treatment plan, and carry out the plan.

Enabling Objectives:

1. List the common causes of pain and bleeding in the first trimester of pregnancy.
2. Describe the pathophysiology of pain and bleeding for each possible cause.
3. Describe the stages of abortion, and outline the steps necessary to determine the presence of infection.
4. Develop a treatment plan for incomplete and uninfected abortion, and carry out appropriate medical, and surgical procedures.
5. Outline a satisfactory management plan for infected abortions:
    i. Demonstrate methods of obtaining material for examination and culture of aerobic and anaerobic bacteria.
    ii. List the common bacteria found in postabortal infection, and describe and contrast clinical responses based on the pathophysiology produced by each.
    iii. Describe the degree and extent of infection.
    iv. Perform the diagnostic procedures, and obtain the diagnostic information necessary to determine the nature and degree of homeostatic disturbance.
    v. Compare and contrast septic shock and hemorrhagic shock.
    vi. Outline the preoperative management of the patient with and without septic shock, and describe the rationale of each management choice.
    vii. Select and carry out appropriate surgical treatment.
    viii. List the important postoperative complications, and describe how each is recognized and treated.
    ix. Discuss with the patient diagnosis for future pregnancies.
6. Demonstrate the ability to diagnose and manage ectopic pregnancy:
    i. Describe the pathophysiology of the various types of ectopic pregnancies; list the clinical manifestations for each implantation site, and describe how they relate to pathophysiology.

ii. Demonstrate the ability to diagnose pregnancy and to differentiate ectopic from intrauterine gestation and conditions simulating pregnancy.
iii. List indications and contraindications for and be able to perform and interpret each of the following adjunctive tests:
    1) Ultrasonography
    2) Laparoscopy
iv. List the choices of surgical procedures for ectopic pregnancy, and describe the indications and contraindications for each procedure.
v. Describe the nonsurgical management (medical treatment-expectant management) for ectopic pregnancy, and describe the indications and contraindications for each.
vi. Institute appropriate management of associated complications, including hypovolemia with and without shock, anemia, and infection.
vii. Discuss with the patient her prognosis for future pregnancy, based of the type of surgical procedure employed and the condition of the remaining pelvic structures.

7. Assess the psychologic status of the patient and her husband, and help them cope with the grief reaction that can occur with first trimester pregnancy loss.

LATE PREGNANCY BLEEDING

Terminal Objective:

Given a patient with bleeding during the last half of pregnancy, the resident should be able to list the possible causes of bleeding, give the characteristic history and physical findings for each condition, and develop and carry out a plan for management of each condition.

Enabling Objectives:

1. Demonstrate the ability to diagnose and manage abruptio placentae:
    i. Define the term, give incidence, and identify the population at risk.
    ii. Describe the pathologic anatomy as it relates to decidua, spiral arterioles, retroplacental hematoma and myometrium.
    iii. Describe the pathophysiology in terms of maternal systemic changes, including a description of the effects if the coagulation mechanism.
    iv. Describe the effects on the fetus.
    v. Assemble the data base necessary to assess the severity of the condition, and the use of the data base to formulate a treatment plan.
    vi. State the prognosis for mother and infant, and describe how patients may be counseled concerning future pregnancy.
2. Demonstrate the ability to diagnose and manage placenta previa:
    i. Define the term, give the incidence, and identify the population at risk.
    ii. Describe the mechanism by which bleeding occurs.
    iii. Describe techniques for placental localization.
    iv. Describe the "double set-up" examination, with particular reference to technique, timing , precautions, and accuracy; outline the methods of expectant and active management designed to optimize maternal and fetal survival.
    v. List the complications of placenta praevia, and describe how they can be prevented and treated.
3. Demonstrate the ability to diagnose and manage vasa previa:
    i. Define the term, and indicate its incidence in single and multiple pregnancies.
    ii. Describe the pathologic anatomy, and relate it to the cause of bleeding.
    iii. Describe tests to identify fetal blood.
    iv. Outline and carry out a plan of management that not only includes the surgical alternatives and indications for each, but also takes into consideration the condition of the fetus.
4. List other causes of late pregnancy bleeding.

5. Discuss with the patient and her partner sexual behaviour in patients with pregnancy-related bleeding.
6. Discuss the anxiety and fear of parents concerning an abnormal child when bleeding has occurred during pregnancy.

MEDICAL AND SURGICAL CONDITIONS COMPLICATING PREGNANCY

Terminal Objective (I):

Given a pregnant patient with a medical or surgical disease, the resident should be able to describe the effects of pregnancy on the disease and the effects of the disease and its treatment on the outcome of pregnancy; describe and order or perform the examinations, diagnostic tests, and procedures necessary to assess the prognosis for mother and fetus; and outline a management plan that integrates medical and obstetric treatment.

Enabling Objectives (I):

1. List the reciprocal effects of pregnancy and each of the following conditions, and outline a management plan for a pregnant woman with each condition:
    i. Gastrointestinal diseases, including hyperemesis gravidarum, appendicitis, regional ileitis-ulcertive colitis, cholecystitis, cholestatic, hepatosis, and viral hepatitis.
    ii. Endocrine-metabolic disorder, including diabetes mellitus, thyroid diseases, and adrenal diseases.
    iii. Diseases of the nervous system, including epilepsy.
    iv. Diseases of the urinary system, including asymptomatic bacteriuria, acute and chronic urinary tract infection, glomerulonephritis, obstructive uropathy, acute and chronic renal failure, polycystic disease, ectopic kidney, and nephrotic syndrome.
    v. Infectious diseases, including:
        1) Those adversely affecting the fetus, such as rubella, cytomegalovirus, toxoplasmosis and varicella-zoster.
        2) Those adversely affecting the gravida, such as influenza, tuberculosis, pneumonia, hepatitis A, and malaria.
        3) Those adversely affecting both gravida and fetus, such as infection with betahemolytic streptococcus (group A and B) or listeria, gonorrhea, syphilis.
    vi. Hematologic disorders, including hemolytic anemia, iron deficiency anemia, megaloblastic anemia.
    vii. Vascular diseases, including thrombophlebitis, venous varicosities, and disseminated intravascular coagulation.
    viii. Reproductive tract diseases, including condylomata, myomas and ovarian cysts.
    ix. Pulmonary diseases, including asthma, and chronic obstructive pulmonary disease.
    x. Autoimmune diseases, including schizophrenia, affective diseases and personality disorders.

xi. Psychiatric diseases, and personality disorders.
xii. Malignant diseases, including those of the breast, ovary, cervix and thyroid.

2. For patients with cardiac disease in pregnancy,
   i. List the major anatomic types of heart disease in pregnancy, and define the New York Heart Association functional classification.
   ii. List and describe the physiologic changes of pregnancy that make diagnosis of heart disease difficult and that stress myocardial reserve during pregnancy, labor, delivery, and the puerperium.
   iii. State and describe the therapeutic goals and preventive measures, and outline a plan of management for pregnancy, labor, and delivery for patients with various anatomic and functional classes of heart disease.
   iv. List the common maternal and fetal complications.
3. For patients with diabetes mellitus,
   i. Define and classify diabetes mellitus in pregnancy
   ii. Describe the pathophysiology, and clinical manifestations of diabetes, and develop a model that integrates these factors with the effects of diabetes on mother, fetus and newborn, as well as the effects of the pregnancy on the diabetes.
   iii. Order and interpret the tests and procedures necessary to diagnose and classify diabetes mellitus and to evaluate and classify diabetes mellitus and to evaluate condition of the mother
   iv. Discuss methods of assessing fetal status, including nonstress testing, ultrasound, and blood parameters.
   v. Outline an integrated plan of management of metabolic regulation by diet with or without insulin treatment.
4. For patients with Hypertensive Disease of Pregnancy.

Terminal Objective (II):

Given a patient in the 34th week of pregnancy with hypertension and proteinuria, the resident should be able to make a differential and specific diagnosis, and to outline and carry out a treatment plan designed to restore normal maternal physiologic function with due concern for the welfare of the fetus.

Enabling Objectives (II):

1. List the types of hypertensive diseases that complicate, and state the diagnostic criteria for each:
    i. Acute preeclampsis-eclampsia
    ii. Chronic hypertension
    iii. Preeclamlsia superimposed on chronic hypertensive renal disease
    iv. Transient hypertension
2. Compare, contrast, and integrate the pathophysiologic and pathologic changes in all organ systems for each of the hypertensive disorders.
3. Outline the diagnostic examinations, test and procedures required for a specific diagnosis.
4. Outline a plan for treatment and follow-up of each hypertensive disorder, including monitoring.
5. Discuss methods of assessing fetal status, including nonstress testing, ultrasound, and blood parameters.
6. With respect to preeclampsia,
    i. List factors associated with the disease in primigravid and multigravid women
    ii. List theories of the cause, and evaluate each theory
    iii. State diagnostic criteria for mild preeclampsia, severe preeclampsia and eclampsia
7. Identify which disease processes are associated with typical fetal and placental changes, and describe the changes.

OBSTETRIC ANALGESIA, ANESTHESIA AND THEIR EFFECTS ON THE MOTHER AND THE FETUS

Terminal Objective:

Given a patient in labor, the resident should be able to select and manage the most desirable analgesia and the most appropriate method of anesthesia for delivery.

Enabling Objectives:

1. List the acceptable methods of relieving pain, including emotional support and psycho-prophylaxis during labor, and of providing anesthesia for delivery.
2. Describe the pharmacologic effects on mother and fetus of each agent.
3. Describe the immediate and long-term complications of each method, and demonstrate competence in managine these complications.
4. Compare and contrast the effects of each method on a patient in premature labor with effects on a patient in labor at term.
5. Explain the importance of the position of the fetus, kind of delivery anticipated, duration of pregnancy, and presence of complications in selecting a method of anesthesia

DIAGNOSIS AND MANAGEMENT OF AMENORRHEA

أ. Primary Amenorrhea

Terminal Objective:

Given a 16-year-old patient with normal habitus and intellect who has never menstruated, the resident should demonstrate the capacity to understand her concern, institute an appropriate evaluation, discuss the rationale for investigation, and implement, appropriate therapy or counselling.

Enabling Objectives:

1. Define the complaint, and give the mean and the normal range for age and onset of menses.
2. Discuss those element in the history and physical examination that merit special attention, including eating habits and physical activity.
3. List the laboratory determinations essential to the initial evaluation.
4. Defin eunuchoidism in terms of body habitus, height, and span; list skeletal, roentgenographic, and secondary sex characteristics, including confirmatory studies.
5. List the anomalies that coexist with genital maldevelopment in Turner's syndrome; give the reason for that coexistence, when known, and the laboratory finding that is most diagnostic.
6. Discuss the pathogenesis and the laboratory confirmation of the disorder that comprises lymphocytic karyotype 46, XY normal breast development, and congenitally absent uterus; outline the principles of therapy.
7. Given lymphocytic karyotype 46, XX with ambiguous external genitalia, state the most likely diagnosis, and develop a plan to establish that diagnosis.
8. Define cryptomenorrhea, giving a typical history, physical findings appropriate to vaginal and uterine occlusion, recommended management, and prognosis for fertility.
9. Define Barr body analysis; discuss the limitations and the possibility of misinterpreting the test.
10. Cite the drug dosage appropriate to induce withdrawal bleeding, describing its usefulness in evaluation.
11. Give indications for serum gonadotrophin assay and subsequent diagnostic procedures indicated in the event of low, normal, or high concentrations.
12. Give indications for measurements of serum, and recommended subsequent diagnostic procedures in the event of values higher than normal.

ب. Secondary Amenorrhea

Terminal Objective:

Given a woman in her reproductive years with menarche at age 12 and periodic but irregular menses until 3 months earlier, the resident should be able to state the goals of evaluation, carry out the appropriate diagnostic steps, explain them to the patient, and institute the appropriate therapy.

Enabling Objectives:

1. Describe the features of the history and physical examination that deserve special emphasis in evaluation of secondary amenorrhea.
2. Discuss the role of stress both physical and emotional in the generation of Secondary amenorrhea.
3. List the disorders of the hypothalamus, anterior pituitary, ovaries, thyroid, and adrenals known to produce this complaint.
4. List the laboratory work essential for initial assessment.
5. Describe the usefulness progesterone withdrawal in evaluation, including drug dosage, and the significance of failure of withdrawal bleeding.
6. Discuss the usefulness of karyotypic analysis, hysterography, laparoscopy and ovarian biopsy in diagnosis.
7. List indications for measurement of gonadotrophin activity in the serum, the significance of high or low concentrations.
8. Describe the endometrial obliteration syndrome (Asherman), and give a typical history for such a disorder.
9. List indications for measurement of serum cortisol, 17-hydroxyprogesterone, and androgens in evaluating secondary amenorrhea.
10. Give drug and dosage for diagnostic adrenal supression, and give indications for its use in this complaint.
11. Define the polycystic ovarian syndrome and discuss theories of pathogenesis, the pharmacologic and surgical management, and probabilities of success in establishing menses and fertility.
12. Describe indications and content of a drug regimen capable of stimulating normal ovarian cycles, as well as methods of monitoring therapy.
13. Define hypothalamic anovulation, its pathogenesis, and its relationship to this complaint, and give possible management protocols.
14. Define anorexia nervosa, state its pathogenic relationship to secondary amenorrhea, and outline the therapy of this condition.
15. Discuss the role of depression and psychotrophic drugs in secondary amenorrhea.
16. Discuss the occurrence of secondary amenorrhea in runners and ballet dancers.

DIAGNOSIS AND MANAGEMENT OF FIBROID

Terminal Objective:

Given a patient referred because of "fibroid uterus", the resident should be able to evaluate pertinent symptomatology, confirm the physical findings, state the differential diagnosis, and outline a plan of management.

Enabling Objectives:

1. Demonstrate ability to discern pelvic masses than 5 cm in diameter.
2. Describe the differential diagnosis of pelvic masses larger than 5 cm in diameter.
3. List symptoms that may be produced by leiomyomas.
4. List the factors that may cause enlargement of leiomyomas.
5. List the indications for medical therapy of fibroid and describe the limitations and complications of such therapy.
6. List the indications for surgical treatment of leiomyomas and state criteria for myomectomy and for hysterectomy.
7. Discuss the role of ultrasound in the evaluation of pelvic masses.

DIAGNOSIS AND MANAGEMENT OF INFERTILITY IN GENERAL

Terminal Objective:

Given a patient who has been trying to become pregnant for 18 months without success, the resident should be able to discuss the implications, explain the evaluation procedure to the patient and her partner, carry out the diagnostic steps necessary, and provide appropriate counseling and therapy.

Enabling Objectives:

1. Describe the features of the history and physical examination of each partner.
2. Define the possible bases for ambivalence and conflict between couples with this complaint.
3. Distinguish between interstitial (Leydig) cells, supporting (Sertoli) cells, and germ cells.
4. Describe the relation between tunica albuginea, rete testis, and hilus.
5. Describe the histologic appearance of the male accessory structures.
6. Describe the components of the spermatic cord.
7. Describe the hormonal mechanisms involved in the regulation of androgen production and spermatogenesis.
8. Discuss the technique of basal body temperature recording, its biochemical basis and its usefulness in infertility appraisal.
9. Define and describe the usefulness of analyzing cervical mucus with respect to volume, fluidity, spinnbarkeit, and ferning.
10. Discuss the role of chronic cervicitis in impaired fertility.
11. State the evidence bearing on immunologic reactivity between sperm and cervical fluids in human fertility.
12. List techniques for establishing the time of ovulation, and explain the limitations of each.
13. Satisfactorily perform hysterosalpingography, and diagnostic laparoscopy.
14. Discuss the effects of uterine retroflexion, displacement and malformation, uterine leiomyomas, postabortal and gonococcal salpingitis on fertility.
15. List norms of ejaculate volume, coagulation, fluidity, sperm concentration, morphology, and motility.
16. List studies appropriate to the evaluation of azospermia.
17. List laboratory determinations essential to analysis of infertility in couples.
18. Discuss pharmacologic agents used in the induction of ovulation with respect to their pharmacologic effects, availability, administration, indications, costs and hazards.

19. Discuss the use of ultrasound techniques for monitoring ovulation induction.
20. Describe the surgical procedures appropriate to cornual, isthmic, or infundibular tubal occlusion and the probable postoperative conception rates using macro and micro techniques.
21. Provide a working definition of luteal phase defect and plan for its treatment.
22. Discuss the effect of unilateral salpingectomy or oophorectomy on fertility.

DIAGNOSIS AND MANAGEMENT OF GESTATIONAL TROPHOBLASTIC NEOPLASIA

Terminal Objective:

Given a patient whose last normal menstrual period began 14 weeks ago, who has had a brown vaginal discharge for 4 weeks, and whose uterus is the size of a 20-week gestation, the resident should be able to make a differential diagnosis, develop a plan of investigation, and institute treatment of the problem.

Enabling Objectives:

1. Describe the pathophysiology of each condition that could cause the symptoms.
2. List the studies needed to confirm the diagnosis.
3. Outline a plan to treatment based on the various types of trophoblastic disease
4. Assuming that the diagnosis is hydatidiform mole
    i. Demonstrate ability to make a histologic diagnosis
    ii. State the usual karyotype of hydatidiform mole
    iii. Discuss the uterine size and history of vaginal bleeding
    iv. Discuss the methods of preoperative diagnosis
    v. Discuss the methods of evacuating the uterus, and list the indications, contraindications, and complications of each.
5. Assuming that the patient is still bleeding 6 weeks after the mole has been evacuated and the serum level of the beta-subunit of hCG is 50,000 IU/ml
    i. List the possible causes, and indicate which is most likely
    ii. Design a program of investigation to confirm the diagnosis
    iii. Describe the possible methods of therapy and the anticipated cure rates
    iv. Name the conditions that reduce the probability of cure with chemotherapy
    v. Outline a follow-up program that includes interpretation of hormone studies
    vi. Advise the patient concerning the prognosis and advisability of attempting another pregnancy

DIAGNOSIS AND MANAGEMENT OF VULVAL AND VAGINAL INFECTIONS

I. Terminal Objective:

Given a patient with vulvar tenderness, discharge, and itching, the resident should be able to record the history and clinical findings, make a working and a differential diagnosis, and provide initial and follow-up care to the point of establishing the correct diagnosis and effecting clinical improvement.

Enabling Objectives:

Provide a comprehensive listing of vulvar lesions and infectious agents that must be considered, and indicate those diseases that are sexually transmitted.
Describe the distinguishing local and systemic characteristics of these lesions, methods of their diagnosis, pathologic and epidemiologic characteristics, and therapeutic measures for these problems.

II. Terminal Objective:

Given a patient with a symptomatic vaginal discharge, the resident should be able to record the history and clinical findings, make a working and differential diagnosis, and provide initial and follow-up care to the point of establishing the correct diagnosis and effecting clinical improvement.

Enabling Objectives:

Provide a comprehensive listing of lesions and infectious agents that must be considered.
Describe the distinguishing characteristics of these lesions; methods of diagnosis including office laboratory procedures; pathologic and epidemiologic characteristics; and the therapeutic measures available for their control.

DIAGNOSIS AND MANAGEMENT OF PELVIC INFLAMMATORY DISEASES

Terminal Objective (I):

Given a 25-year-old woman who has recently underwent ERPOC following incomplete abortion, has a temperature of 30oC, and has a tender, firm mass filling the pelvis and rising to the level of the umbilicus, the resident should be able to record a detailed history, report clinical findings that accurately describe the pathology of the uterus, adnexa, and associated abdominal organs; make a working and differential diagnosis; and provide initial and continuing care.

Enabling Objectives (I):

1. Describe the anticipated signs and symptoms, and the clinical management of septicemia, septic shock, septic pulmonary embolism, and anaerobic and aerobic bacterial infections.
2. Discuss inflammatory diseases resulting from induced abortion in the first or second trimester with and without laceration of the uterus including possible bacterial agents, most effective antibiotic agents for each bacterial infection, and common complications associated with their use.
3. Discuss the pharmacology of the antibiotic agents as it relates to mode of action and side effects.

Terminal Objective (II):

Given a 25-year-old woman who complains of low abdominal pain and yellow vaginal discharge, the resident should be able to record the detailed history, clinical findings, the working diagnosis, and the differential diagnosis; the resident should also be able to provide initial and continuing care.

Enabling Objectives (II):

1. Describe the pathogenesis of venereal disease, including that of gonorrhea and syphilis.
2. Describe the epidemiology and public health aspects of venereal disease in the locality.
3. Describe the clinical and laboratory methods for presumptive and definitive diagnosis.
4. Describe the causes, as well as the gross and histologic changes, of acute and chronic salpingitis.
5. Define chronic pelvis pain, list the causes and theories of chronic pelvic pain, and discuss its relation to emotional well-being.
6. Discuss the diagnosis and management of chronic pelvic pain.

Terminal Objective (III):

Given a 30-year-old woman with a history of repeated bouts of salpingitis who complains of acute abdominal pain, fever and rebound tenderness, the resident should be able to describe an evaluation and management procedure.

Enabling Objectives (III):

1. Describe the differential diagnosis of acute surgical abdomen.
2. Discuss the late complications of salpingitis, including hydrosalpinx, pelvic abscess, and infertility.
3. Describe the microbiologic characteristics of salpingitis in its various degress of severity and the treatment based on these factors.
4. Describe the consequences of systemic involvement.
5. Describe the treatment alternatives.
6. Outline a plan of management.

DIAGNOSIS AND MANAGEMENT OF URINARY TRACT INFECTIONS

Terminal Objective (I):

Given a 25-year-old woman with complaint of acute unilateral costovertebral angle pain and a temperature of 103^{o}F with associated dysuria, frequency, and hematuria, the resident should be able to record the detailed history, clinical findings, the working diagnosis, and the differential diagnosis, and to provide initial and continuing care.

Enabling Objectives (I):

1. Describe the pathophysiology, microbiology, laboratory and roentgenographic diagnostic methods, and therapy of pyelonephritis and cystitis caused by gram-negative bacteria, acid-fast bacilli, and obstructive uropathy.
2. Discuss the incidence, evaluation, implications and therapy of asymptomatic bacteriuria in pregnancy and non-pregnant women.
3. Discuss the treatment of recurrent urinary tract infection in women, including renal, bladder, and urethral components, and its relationship to chronic renal disease.

Terminal Objective (II):

Given a 25-year-old woman complaining of burning sensation and increased frequency with a urine culture showing less than a significant number of bacteria, the resident should be able to develop a differential diagnosis and outline treatment.

Enabling Objectives (II):

1. Discuss current terminology e.g. urethral syndrome
2. Understand pathophysiology
3. Describe clinical presentation
4. List laboratory diagnosis
5. Discuss prophylaxis and treatment

DIAGNOSIS AND TREATMENT OF DYSMENORRHEA

Terminal Objective (I):

Given a 21-year-old nulligravida who has complained over the past year of incapacitating pain that requires bed rest at onset of menses, the resident should be able to institure measures to reduce distress, carry out a diagnostic survey, and provide therapy and patient education where necessary.

Enabling Objective (I):

Describe the psychology, pathophysiology, and management of primary dysmenorrhoea, including both medical and surgical management.

Terminal Objective (II):

Given a 36-year-old nulligravida with complaints of premenstrual weight gain, irritability, edema, breast tenderness, headaches, depression, and menstrual pain, the resident should be able to elicit an appropriate history, perform a physical examination obtain other appropriate diagnostic information, institute therapy, and explain condition and its management to the patient.

Enabling Objectives (II):

1. Differentiate between pain a neurophysiologic occurrence and as a subjective event.
2. Discuss the relationship between a person's emotional state and the subjective response to a standardized pain stimulus, and state its implication for dysmenorrhea management.
3. List diseases of the uterus and adnexa likely to produce secondary dysmenorrhea.
4. Describe the effectiveness, hazards, and complications of using stimulants, analgesics, tranquilizers, prostaglandin synthetase inhibitors, diuretics, and hormones in the treatment of dysmenorrhea.
5. Discuss the principles of superficial psychotherapy for pelvic pain including:
    i. Explanation
    ii. Reassurance
    iii. Environmental manipulation
    iv. Ventilation
    v. Counseling
6. Describe a protocol for the management of the premenstrual tension syndrome.

ABNORMAL MENSTRUATION

Terminal Objective (I):

Given a 39-year-old with regular cycles but profuse and prolonged vaginal bleeding, a 29-year-old woman with prolonged and infrequent menses for 6 months postpartum, and a 24-year-old woman with acyclic irregular bleeding variable in duration and amount, all with normal physical findings on pelvic examination, the resident should be able to carry out a diagnostic appraisal and apply appropriate therapy.

Enabling Objectives (I):

1. Discuss methods of relating the actual amount of bleeding to the described amount.
2. Define and discuss "dysfunctional uterine bleeding" particularly in relation to endometrial hyperplasia, irregular shedding and anovulatory bleeding.
3. List and define the terms used to describe abnormal menstruation, and discuss the limitations of such terms.
4. Discuss anovulatory bleeding in terms of ovarian secretion, follicular development, and endometrial development, including hyperplasia and adenocarcinoma.
5. List entities known to be associated with anovulation.
6. Describe techniques for confirming anovulation, contrasting the advantages and disadvantages of each technique and indicating the proper time in the menstrual cycle for employment of each
7. Describe pharmacologic techniques, including drug dosages, for the medical management of these problems.
8. List the indications for surgical management of these problems, and describe the appropriate surgical procedures.
9. List those pathologic entities known to be associated with abnormal bleeding despite ovulation.
10. Discuss the relationship among obesity, anovulation, and endometrial hyperplasia.
11. Discuss the relationship between exercise and menstrual function.

Terminal Objective (II):

Given a 14-year-old girl with acyclic, heavy and increasingly frequent menses, the resident should be able to evaluate the problem and formulate an appropriate management plan.

Enabling Objective (II):

Describe the basis and frequency of anovulation in this age group, a technique for confirming the diagnosis, and a program for management.

SURGICAL/TECHNICAL CAPABILITIES FOR JUNIOR RESIDENTS

Terminal Objective:

The resident should be able to perform the surgical procedures listed under the content of the junior years of residency (Table 1 & 2 pages 21 & 22).

Enabling Objectives:

1. Discuss the emotional impact, if any, of each of those operations on the patient and her husband.
2. Describe the gross anatomic relations among the structures within the pelvis, including lymphatics, vascular supply, and course of the ureter.
3. Describe the necessary preoperative preparation.
4. List the common complications and their management.
5. Outlin the principles of postoperative care.
6. Demonstrate the ability to manage the actual preoperative, operative and postoperative care.

SAUDI SPECIALITY CERTIFICATE IN
OBSTETRICS & GYNAECOLOGY
SSCOG

Syllabus for the Ob/Gyn Senior Residency Years

SYLLABUS FOR THE OB-GYN SENIOR RESIDENCY YEARS

- **OBSTETRICS**
  - DIAGNOSIS, AND MANAGEMENT OF MEDICAL AND SURGICAL CONDITIONS COMPLICATING PREGNANCY
  - PERFORMANCE OF AMNIOCENTESIS, EXTERNAL CEPHALIC VERSION, AND EVACUATION OF PERINEAL HEMATOMA
  - DIAGNOSIS AND MANAGEMENT OF FREQUENT PREGNANCY LOSS
- **GYNAECOLOGY**
  - PATHOGENESIS, DIAGNOSIS, AND MANAGEMENT OF ENDOMETRIOSIS
  - DIAGNOSIS, AND MANAGEMENT OF GENITAL PROLAPSE AND URINARY INCONTINENCE
  - EVALUATION AND MANAGEMENT OF PELVIC MASS
  - PATHOPHYSIOLOGY, EVALUATION AND TREATMENT OF HIRSUTISM
  - PATHOPHYSIOLOGY, DIAGNOSIS AND MANAGEMENT OF GALACTORRHEA
  - DIAGNOSIS AND MANAGEMENT OF POLYCYSTIC OVARIES
  - DIAGNOSIS AND MANAGEMENT OF INFERTILITY INCLUDING BASIC WORKUP OF THE MALE
  - DIAGNOSIS AND MANAGEMENT OF THE MENOPAUSE
  - DIAGNOSIS AND MANAGEMENT OF GYNAECOLOGICAL MALIGNANCIES
  - APPLICATION OF COLPOSCOPY, LASER AND CRYOTHERAPY IN GYNAECOLOGY
- **OTHERS**
  - MATERNAL MORTALITY
  - PERINATAL MORTALITY AND MORBIDITY
  - LITERATURE AND RESEARCH
  - SURGICAL/TECHNICAL CAPABILITY

DIAGNOSIS, MANAGEMENT AND FOLLOW-UP OF MEDICAL AND SURGICAL CONDITIONS COMPLICATING PREGNANCY

MEDICAL AND SURGICAL CONDITIONS COMPLICATING PREGNANCY

Terminal Objective:

Given a pregnant patient with a medical or surgical disease, the resident should be able to describe the effects of pregnancy on the disease and the effects of the disease and its treatment on the outcome of the pregnancy; describe and order or perform the examinations, diagnostic tests, and procedures necessary to assess the prognosis for mother and fetus; and outline a management plan that integrates medical and obstetric treatment.

Enabling Objectives:

1. List the reciprocal effects of pregnancy and each of the following conditions, and outline a management plan for a pregnant woman with each condition:
    i. Gastrointestinal diseases, including regional ileitis-ulcerative colitis, cholecystitis, cholestatic, hepatosis
    ii. Endocrine-metabolic disorders, including thyroid diseases, and adrenal diseases
    iii. Diseases of the nervous system
    iv. Diseases of the urinary system, including, glomerulonephritis, obstructive uropathy, acute and chronic renal failure, polycystic disease, ectopic kidney, and nephrotic syndrome
    v. Reproductive tract diseases, including condylomata, myomas, and ovarian cysts
    vi. Malignant diseases, including those of the breast, ovary, cervix and thyroid

PERFORMANCE OF AMNIOCENTESIS, EXTERNAL CEPHALIC VERSION, AND EVACUATION OF PERINEAL HEMATOMA

Terminal Objective:

The resident should be able to describe and perform each of the above procedures.

Enabling Objectives:

1. Describe each procedure.
2. List the indications for each.
3. List the immediate and remote complications of each for mother and infant as appropriate.

DIAGNOSIS AND MANAGEMENT OF FREQUENT PREGNANCY LOSSES

Terminal Objective:

Given a patient with an intrauterine pregnancy at 8 weeks and a history of previous frequent pregnancy losses whether early (recurrent abortions) or late (perinatal deaths), the resident should be able to list the possible causes of the patient's previous pregnancy losses and carry out the indicated diagnostic procedures, outline and describe a plan of management, discuss the rationale of the plan, recognize abnormalities as they develop, and carry out treatment designed to preserve the pregnancy.

Enabling Objectives:

1. List the possible causes of the condition.
2. Describe and obtain the characteristic history of each condition, including incompetent cervix, medical disorders, risk factors for genetic causes.
3. Perform an appropriate physical examination and describe and elicit signs and characteristics of syndromes causing recurrent pregnancy losses, including, hyperprolactinemia, hypothyroidism, and autoimmune disease.
4. Describe the basis for and interpretation of the following diagnostic studies:
    i) Karyotyping
    ii) Hystography/hysteroscopy
    iii) Late luteal phase endometrial biopsy
    iv) Levels of prolactin, thyroid hormones, and progesterone
    v) Genital tract culture
    vi) Immunologic studies, including nuclear antibodies, cardiolipin antibodies, and lupus anticoagulant
5. Discuss the gross and microscopic anatomy and biochemistry of the cervix.
6. Discuss the relationship of injury to cervical integrity.
7. Outline and carry out a therapeutic plan including:
    i) Medical therapy for luteal phase defect
    ii) Medical therapy for autoimmune conditions
    iii) Surgical correction of a uterine defect
    iv) Surgical procedures for the incompetent cervix
8. Demonstrate an understanding of complications of intervention whether medical and surgical.

PATHOGENESIS, DIAGNOSIS, AND MANAGEMENT OF ENDOMETRIOSIS

Terminal Objective:

Given a young woman with severe menstrual pain that interferes with her activities and appears to be increasing in severity, the resident should record the detailed history and clinical findings, state the working diagnosis and the differential diagnosis, and provide initial and continuing care.

Enabling Objectives:

1. Describe the procedures useful for differential diagnosis of pelvic pain.
2. Discuss the influence of age, social institution, and parity on the selection of a medical and surgical approach to both diagnosis and therapy of pelvic pain.
3. Describe the pathogenesis, pathology, and common sites of the lesions of endometriosis and adenomyosis.
4. List the indications for medical and surgical therapy for endometriosis.
5. Discuss the various methods of medical and surgical treatment for endometriosis, and state the probability of success for each.

DIAGNOSIS AND MANAGEMENT OF GENITAL PROLAPSE AND URINARY INCONTINENCE

Terminal Objective:

Given a patient with a history of pelvic heaviness, "something falling out" and/or "stress incontinence", the resident should be able to elicit an appropriate history, recognize any defects present on pelvic examination, carry out preoperative evaluation of the patient's status, perform the required surgery, and state the important aspects of postoperative care.

Enabling Objectives:

1. Define uterine descensus, cystocele, urethrocele, rectocele, and vaginal prolapse.
2. Describe the normal supporting structures in the female pelvis.
3. List the factors predisposing to pelvic relaxation.
4. Describe the pathologic anatomy associated with pelvic relaxation.
5. List the symptoms commonly associated with pelvic relaxation, and explain the pathophysiologic mechanisms leading to those symptoms.
6. List various types of urinary incontinence, define each, state the mechanism of each and the management of each.
7. Interpret a cystometrogram.
8. List the conditions, the indications, and the contraindications for surgery for pelvic relaxation.
9. Describe perineal muscle exercises, and instruct a patient in the use of these exercises.
10. Discuss the medical management of pelvic relaxation, urge incontinence, and detrusor dyssnergia.
11. Discuss types and uses of pessaries.
12. List the indications and contraindications for anterior colporrhaphy.
13. Describe surgical procedures for correction of urinary stress incontinence, and state the important steps in the operative technique and the relative success rates of these procedures.

EVALUATION AND MANAGEMENT OF PELVIC MASSES

Terminal Objective:

Given a patient with a pelvic mass, the resident should be able to outline a plan for evaluation and management.

Enabling Objective:

Describe differences in management based on the patient's age, size of mass, character of the mass, and associated findings.

PATHOPHYSIOLOGY, EVALUATION AND TREATMENT OF HIRSUTISM

Terminal Objective:

Given a young obese, nulligravida with excessive facial hair, the resident should be able to evaluate her status, explain the pathophysiology of her condition, support her concern for her feminine identity, and carry out specific therapy when indicated.

Enabling Objectives:

1. Define hirsutism, hypertrichosis, defeminization, and virilization.
2. List those racial and national groups in which hirsutism is relatively common.
3. Discuss sexual dimorphism in adults and its relationship to hormone concentration and end-organ sensitivity.
4. Indicated the relative frequency of constitutional hirsutism among women with this complaint.
5. List elements of the history and physical findings that deserve emphasis in appraising this complaint.
6. Given a unilateral adnexal mass 6 cm in diameter in this patient, list the neoplasms that may be present and describe the important gross and microscopic features of each.
7. Discuss the relationship of hirsutism to the polycystic ovarian syndrome.
8. Differentiate adrenal from ovarian excessive androgen production, assuming no malignant neoplasm.
9. Give the drug and dosage for a satisfactory adrenal suppression test and state the implication of the following:
    i. No reduction of elevated levels of dehydroepiandrosterone-sulfate (DHEA-S) and 17-hydroxysteroids
    ii. Partial reduction of a moderately elevated excretion of urinary DHEA-S and 17-hydroxysteroids
    iii. Elevated morning serum cortisol concentration
10. Discuss the relationship of hirsutism to Cushing's syndrome, describing the possible pathologic entities and criteria for diagnosis.
11. Differentiate congenital from acquired adrenal hyperplasia in terms of etiology, genital morphology, general metabolic effects, and treatment.
12. Discuss the effectiveness of the treatment of hirsutism by hormonal therapy and electrolysis, and discuss spontaneous regression.

PATHOPHYSIOLOGY, DIAGNOSIS AND MANAGEMENT OF GALACTORRHEA

Terminal Objective:

Given a young woman with galactorrhea with or without amenorrhea, the resident should be able to evaluate the patient's condition, establish a diagnosis, explain the condition and its treatment to the patient, and provide adequate management.

Enabling Objectives:

1. Define galactorrhea as a clinical and pathologic entity.
2. List history and physical findings that are diagnostic of hyperprolactinemia.
3. Define the normal and abnormal circulating levels of prolactin in nonpregnant, pregnant, and lactating women; discuss the neuroendocrine control of the prolactin level, including releasing and inhibiting factors.
4. Describe the tests needed to evaluate abnormal prolactin secretion.
5. Discuss the medical and surgical management of hyperprolactinemia in both pregnant and non-pregnant patients with and without an identifiable pituitary tumor.
6. Discuss the mode of action, indications, dosage and side effects of bromocriptine.

DIAGNOSIS AND MANAGEMENT OF POLYCYSTIC OVARIES (PCO)

Terminal Objective:

Given a young overweight woman with irregular menses with hirsutism, and with or without concern for getting pregnant, the resident should be able to evaluate the patient's condition, establish a diagnosis, explain the condition and its treatment to the patient, and provide adequate management.

Enabling Objectives:

1. Define PCO as a clinical and pathologic entity.
2. List history and physical findings that are diagnostic of PCO.
3. Discuss the pathophysiology of the hormonal abnormality in PCO.
4. Describe the tests needed to evaluate abnormal gonadotrophins and androgens secretion.
5. Discuss the medical and surgical management of PCO.
6. Discuss the complications of such therapy and list the precautions necessary to minimize them.

DIAGNOSIS AND MANAGEMENT OF INFERTILITY INCLUDING BASIC WORK-UP OF THE MALE IN INFERTILITY

Terminal Objective:

Given a patient who has been trying to become pregnant for 18 months without success, the resident should be able to discuss the implications, explain the evaluation procedure to the patient and her partner, carry out the diagnostic steps necessary, and provide appropriate counselling and therapy.

Enabling Objectives:

1. Describe the features of the history and physical examination of each partner.
2. Define the possible bases for ambivalence and conflict between couples with this complaint.
3. Distinguish between interstitial (Leydig) cells, supporting (Sertoli) cells, and germ cells.
4. Describe the relation between tunica albuginea, rete testis, and hilus.
5. Describe the histologic appearance of the male accessory structures.
6. Describe the components of the spermatic cord.
7. Describe the hormonal mechanisms involved in the regulation of androgen production and spermatogenesis.
8. Discuss the technique of basal body temperature recording, its biochemical basis, and its usefulness in infertility appraisal.
9. Define and describe the usefulness of analyzing cervical mucus with respect to volume, fluidity, spinnbarkeit, and ferning.
10. Discuss the role of chronic cervicitis in impaired fertility.
11. State the evidence bearing on immunologic reactivity between sperm and cervical fluids in human fertility.
12. List techniques for establishing the time of ovulation, and explain the limitations of each.
13. Satisfactorily perform hysterosalpingography, and diagnostic laparoscopy.
14. Discuss the effects of uterine retroflexion, displacement and malformation, uterine leiomyomas, and postabortal and gonococcal salpingitis on fertility.
15. List norms of ejaculate volume, coagulation, fluidity, sperm concentration, morphology and motility.
16. List studies appropriate to the evaluation of azospermia.
17. List laboratory determinations essential to analysis of infertility in couples.

18. Discuss pharmacologic agents used in the induction of ovulation with respect to their pharmacologic effects, availability, administration, indications, costs and hazards.
19. Discuss the use of ultrasound techniques for monitoring ovulation induction.
20. Describe the surgical procedures appropriate to cornual, isthmic, or infundibular tubal oclusion and the probable postoperative conception rates using macro and micro techniques.
21. Provide a working definition of luteal phase defect, and plan for its treatment.
22. Discuss the effect of unilateral salpingectomy or oophorectomy on infertility.
23. List the indications for artificial insemination using husband's sperms, and discuss the appropriate and inseminating the patient for each indication.
24. Describe in vitro fertilization & embryo transfer and list the indications and hazards associated with each procedure.
25. Describe the Islamic rulings and ethical standing as it relate to the newer assisted conception techniques.

DIAGNOSIS AND MANAGEMENT OF THE MENOPAUSE

Terminal Objective:

Given a 48-year-old para 4 with infrequent and occasionally heavy menses and hot flashes, the resident should be able to evaluate the patient's status, establish a diagnosis, explain the condition and its treatment to the patient, and provide adequate therapy.

Enabling Objectives:

1. Define the menopause as a clinical and physiologic condition.
2. Identify and discuss sources of androgen and estrogen, including the peripheral conversion of androgen to estrogen in the postmenopausal years.
3. List those symptoms and physical findings associated with estrogen deficiency.
4. Discuss the common emotional responses to loss of reproductive capacity, the basis for those responses, and the principle of management.
5. Discuss the rationale, advantages, and hazards of extended estrogen, estrogen plus progestogen, and androgen administration.
6. Give a protocol for management of abnormal vaginal bleeding at this age, together with indications for termination of therapy.
7. Discuss the association of menopausal estrogen treatment with diabetes, cardiovascular disease, smoking, and cancer, and provide a critique of the supporting evidence.
8. Discuss osteoporosis as a healthy problem, and identify mechanisms of occurrence, diagnosis, and management.

DIAGNOSIS AND MANAGEMENT OF GYNAECOLOGICAL MALIGNANCIES

أ. VULVA

Terminal Objective:

Given a 63-year-old woman who has had vulvar pruritis for 3 years, has white and thickened vulvar skin with several superficial fissures, and involvement of the labia, the clitoris, and the perineum, the resident should be able to establish a diagnosis, evaluate the extent of the disease, and provide initial management and appropriate referral.

Enabling Objectives:

1. Categorize the dystrophic lesion of the vulva, and describe the gross and histologic anatomy of each.
2. List the methods used in the selection of biopsy sites, and describe each.
3. Describe the techniques for performing a biopsy of the lesion.
4. Given a histologic diagnosis of vulvar dystrophy
   i. Discuss the relationship between these lesions and carcinoma of the vulva
   ii. Describe the total examination necessary for such a patient
   iii. Describe the treatment
5. Given a diagnosis of squamous cell carcinoma in situ
   i. Describe what evaluation is necessary to determine the extent of the disease
   ii. List the other malignancies found in association with this tumor
   iii. Describe the treatment
6. Given a diagnosis of invasive squamous cell carcinoma
   i. Outline the staging of carcinoma of the vulva
   ii. Describe the treatment
   iii. Discuss the advantages and disadvantages of inguinal and pelvic lymphadenectomy as related to the size and position of the lesion, the age and condition of the patient, and cure rates
   iv. Compare the cure rates and complications of radical vulvectomy with those of radiation therapy as primary therapy
7. Outline a follow-up program for each of the possible treatments
8. List malignant vulval lesions other than squamous cell carcinoma

ب. VAGINA

Terminal Objective:

Given a 51-year-old woman who has a hypertrophic friable lesion measuring 1 cm by 3 cm on the vaginal fornix, and is complaining of intermenstrual and postcoital bleeding, the resident should be able to establish the diagnosis, evaluate the extent of the disease, and provide initial management and appropriate referral.

Enabling Objectives:

1. List possible diagnoses, and describe the pathogenesis.
2. List the steps necessary to make a diagnosis and evaluate the extent of the lesion.
3. Outline the FIGO classification for staging of carcinoma of the vagina.
4. Describe the place of the schiller test, colposcopy, and biopsy in making a diagnosis of vaginal carcinoma.
5. Describe the anatomy, including the lymphatic drainage of vagina, rectum and bladder.
6. Describe the radiation treatment for squamous cell carcinoma of the vagina.
7. Describe the surgical treatment for squamous cell carcinoma of the vagina.
8. Outline a plan for treatment follow-up.

ت. CERVIX

Terminal Objective (I):

Given an asymptomatic 23-year-old nullipara whose only abnormal finding is a cervical cytologic smear that indicates moderate dysplasia, the resident should be able to establish the diagnosis, evaluate the extent of the disease, and provide initial management and appropriate referral.

Enabling Objectives (I):

1. Describe the cervical cytology screening procedure, including indications, patient preparation, smear preparation, possible results, interpretation, and indicated actions.
2. Describe development of the physiologic transformation zone of the cervix.
3. Describe the indications for and limitations of random punch biopsy, Schiller stain-directed biopsy, colposcopically directed biopsy, endocervical curettage, and diagnostic conization.
4. Describe the epidemiology and the natural history of squamous cell carcinoma of the cervix and its precursors.
5. Describe the technique of colposcopy, colposcopic terminology and findings and the diagnostic implications of the various colposcopic findings.
6. If the tissue obtained by cervical biopsy during a satisfactory colposcopic evaluation shows mild or moderated dysplasia (cervical intraepithelial neoplasia grade 1 or 2) and the result of endocervical curettage is negative.
    i. Describe the possible outcomes if nothing is done.
    ii. List possible treatments giving the advantages and disadvantages of each.
7. If the tissue obtained by cervical biopsy at the time of a satisfactory colposcopic examination shows severe dysplasia or carcinoma in situ (cervical intraepithelial neoplasia grade 3) and the result of endocervical curettage is negative.
    i. Describe the possible outcomes if nothing is done.
    ii. List possible treatments giving the advantages and disadvantages of each.
8. If the tissue obtained by cervical biopsy shows moderate dysplasia, severe dysplasia, or carcinoma in situ and the colposcopic examination is considered to be non-definitive or the result of endocervical curettage is either suspicious or positive.
    i. Describe the next diagnostic step.
    ii. If the diagnosis is confirmed;
        1) List the possible outcomes if nothing is done.

2) List the possible treatments, giving the advantages and disadvantages.

9. If the patient is pregnant at the time of the evaluation
   i. Describe the effects of pregnancy on the diagnosis, evaluation, and progress of cervical intraepithelial neoplasia.
   ii. Describe the possible effects of cervical intraepithelial neoplasia on the pregnancy.
10. Discuss the rationale for conservative management of cervical intraepithelial neoplasia, list the various techniques available and describe the indications, values and limitations of each.

Terminal Objective (II):

Given an asymptomatic 32-year-old woman who has two living children, who is currently using oral contraception, and whose only abnormal finding on an annual examination is a cytologic smear consistent with squamous cell carcinoma in situ of the cervix, the resident should be able to establish the diagnosis, evaluate the extent of the disease and provide initial management and appropriate referral.

Enabling Objectives (II):

1. Describe appropriate diagnostic methods and their relative reliability.
2. If a biopsy diagnosis at the time of evaluation is reported as mild dysplasia (cervical intraepithelial neoplasia grade I), describe the further evaluation of the patient's status.
3. If the diagnosis at the time of a satisfactory colposcopic examination is severe dysplasia or carcinoma in situ (cervical intraepithelial neoplasia grade 3) and the result of endocervical curettage is negative.
    i. Describe the pathogenesis and pathologic anatomy.
    ii. Describe the next diagnostic step and its rationale.
    iii. List the possible outcomes if not treated.
    iv. Describe the possible treatments and indicated which is preferable and why.
4. If the confirmed diagnosis is carcinoma in situ and the patient wants another pregnancy
    i. Outline the management through the pregnancy and delivery.
    ii. Describe the management following delivery.
5. If the diagnosis on directed colposcopic biopsy is microinvasive squamous cell carcinoma of the cervix.
    i. Describe the pathologic anatomy.
    ii. Describe the next diagnostic step.
    iii. Describe the possible treatments and indicate which is preferable and why.
6. If the diagnosis is invasive carcinoma
    i. Describe the gross and microscopic appearance of the major cervical neoplasms.
    ii. Describe the epidemiology, pathogenesis, and pathologic anatomy.
    iii. Describe the course if the lesion is not treated.
    iv. Describe the FIGO clinical staging of carcinoma of the cervix, list reasons for staging, and describe the evaluation necessary for staging.
    v. For each clinical stage, list the possible treatments, indicate which is more appropriate, and give current 5-year survival figures.

vi. Describe the incidence if lymph node metastasis by stage and the lymph node groups usually involved.

ث. UTERUS

Terminal Objective:

Given a 56-year-old nulligravida who has a history of a recent episode of bleeding 3 years after menopause, the resident should be able to evaluate the patient's status, establish the diagnosis and the extent of the disease, and provide initial management and appropriate referral.

Enabling Objectives:

1. List the possible causes of the bleeding, and describe the pathophysiology of each.
2. Outline a sequential plan of study that will lead to an accurate diagnosis.
3. Assuming that the cervix is not the source of the bleeding, compare and contrast the diagnostic accuracy of screening cytology, endometrial aspiration, endometrial biopsy and curettage.
4. Contrast the normal histologic appearance of the endometrium (proliferative and secretory) with the changes brought about by infection, ovarian dysfunction, chronic stimulation by estrogen and the effects of contraceptives.
5. Diagnose endometrial neoplasms from their microscopic appearance.
6. Assuming that the histologic diagnosis is endometrial hyperplasia without atypia.
    i. List the possible causes of postmenopausal endometrial hyperplasia, and describe the pathophysiology of each.
    ii. Design a plan of investigation to determine the cause of the hyperplasia.
    iii. Design a treatment for each possible cause.
7. Assuming that the histologic diagnosis is hyperplasia with atypia.
    i. Describe the possible outcome if not treated
    ii. List the medical and surgical methods of treatment, and list the indications, contraindications and result of each.
8. Assuming that the diagnosis is adenocarcinoma:
    i. Describe the FIGO clinical staging of carcinoma of the endometrium, and indicate how the stage affects outcome.
    ii. Discuss how the grade of the tumor affects treatment and outcome.
    iii. List the surgical, radiation, and combined methods of treating adenocarcinoma of the uterus; for each method, discuss the relative indications and contraindications and the 5-year survival rates.

iv. Compare and contrast adenocarcinoma of the uterus with squamous cell carcinoma of the cervix with respect to pathogenesis, epidemiology, method of extension, cause of death, outcome and treatment.
v. Outline a treatment follow-up program for women with endometrial carcinoma.
vi. Describe the principles of chemotherapy for endometrial carcinoma.

9. Diagnosis and initial management of uterine sarcoma.

ج. OVARY

Terminal Objective (I):

Given a 47-year-old woman complaining of constipation and gradual enlargement of the abdomen with an irregular cystic mass filling the pelvis, the resident should be able to state the differential diagnosis, describe the pathophysiology of each possible lesion, and outline a program for establishing an accurate diagnosis.

Enabling Objectives (I):

1. Describe how roentgenography, sonography, exfoliative cytology, and paracentesis can be used as aids in diagnosis.
2. Outline the World Health Organization (WHO) taxonomy of ovarian neoplasms.
3. Describe the gross appearance of ovarian neoplasms.
4. Describe the histology and histologic behavior of each of these neoplasms.
5. Outline the FIGO system for staging cancer of the ovary.
6. State the symptoms and physical findings commonly associated with tumors of the ovary.
7. Discuss the difficulties encountered in the early diagnosis of ovarian cancer.
8. Outline the management of an ovarian tumor discovered during routine examinations of women in different age groups; i.e., premenarcheal, adolescent, adult and postmenopausal.
9. Discuss the role of radiation therapy and chemotherapy in the postoperative management of ovarian cancer, including expected cure rates.
10. Concerning cancer chemotherapy, describe:
    i. The cellular kinetics for protein synthesis
    ii. The specific mode of action, major side effects, and one example of:
        1) Antimetabolites
        2) Alkylating agents
        3) Antibiotics
        4) Mitotic inhibitors
        5) Steroid hormones
        6) Specific metabolic inhibitors
11. Describe the influence on surgical treatment of age, parity, bilaterality, presence of ascites, papillary appearance externally, and presence of adhesions to surrounding structures.
12. Describe the proper incision, method of abdominal exploration and specimen collection appropriate when operating on a patient with an ovarian neoplasm.
13. Develop a treatment follow-up program, including procedures to determine whether the tumor has been eradicated.

Terminal Objective (II):

Given a 26-year-old recently married nulligravida with a multilocular cystic tumor of the left ovary 10 cm in diameter, the resident should be able to outline an appropriate treatment program.

Enabling Objectives (II):

1. List the types of tumor that may occur in order of frequency, and describe the pathophysiology of each.
2. Describe in detail the operative procedure for each tumor type, indicating the reasons for each step.
3. Discuss the possibility of a unilateral adnexectomy in the treatment of various ovarian malignancies.
4. Assuming a diagnosis of adenocarcinoma, describe postoperative treatment under the following circumstances.
    i. There was no evidence of tumor extension, and only the involved ovary is removed.
    ii. There was no evidence of tumor extension, and a hysterectomy and bilateral salpingo-oophorectomy were performed.
    iii. Only the tumor was removed, and malignant cells were reported in peritoneal fluid.

ج. FALLOPIAN TUBE

Terminal Objective:

Given a 60-year-old woman complaining of excessive vaginal discharge and lower abdominal pain with an irregular adnexial mass. The resident should be able to state the differential diagnosis, describe the pathology of each possible lesion, and outline a program for establishing an accurate diagnosis.

Enabling Objectives:

1. Describe how sonography, vaginal cytology and hysteroscopy can be used as aids in diagnosis.
2. Describe the gross appearance of fallopian tube neoplasm.
3. Describe the histology and histologic behavior of carcinoma of the oviduct.
4. Outline the FIGO system for staging tubal carcinoma.
5. State the symptoms and physical finding commonly associated with tumors of the fallopian tube.
6. Discuss the role of radiation therapy and chemotherapy in the postoperative management of ovarian cancer, including expected cure rates in relation to the stages of the disease.

APPLICATION OF COLPOSCOPY, LASER & CRYOTHERAPY IN GYNAECOLOGY

Terminal Objective:

Given an asymptomatic young woman whose only abnormal finding is a cervical cytology smear that incidates moderate dysplasia, the resident should be able to establish the diagnosis, evaluate the extent of the disease, and provide management or appropriate referral.

Enabling Objectives:

1. Describe the cervical cytology screening procedure, including indications, patient preparation, smear preparation, possible results, interpretation, and indicated actions.
2. Describe development of the physiologic transformation zone of the cervix.
3. Describe the Bethesda system for reporting a pap smear result.
4. Describe the indications for and limitations of random punch biopsy, Schiller stain-directed biopsy, colposcopically directed biopsy, endocervical curettage, and diagnostic conization.
5. Describe the technique of colposcopy, colposcopic terminology and findings and the diagnostic implications of the various colposcopic findings.
6. If the tissue obtained by cervical biopsy during a satisfactory colposcopic evaluation shows mild or moderated dysplasia (cervical intraepithelial neoplasia grade 1 or 2) and the result of endocervical curettage is negative:
    i. Describe the possible outcomes if nothing is done.
    ii. List possible treatments giving the advantages and disadvantages of each.
7. If the tissue obtained by cervical biopsy at the time of a satisfactory colposcopic examination shows severe dysplasia or carcinoma in situ (cervical intraepithelial neoplasia grade 3) and the result of endocervical curettage is negative.
    i. List the possible outcomes if nothing is done.
    ii. List possible treatments giving the advantages and disadvantages of each.
8. If the tissue obtained by cervical biopsy shows moderate dysplasia, severe dysplasia, or carcinoma in situ and the colposcopic examination is considered to be non-definitive or the result of endocervical curettage is either suspicious or positive.
    i. Describe the next diagnostic step.
    ii. If the diagnosis is confirmed;
        1) List the possible outcomes if nothing is done.

2) List the possible treatments, giving the advantages and disadvantages.

9. If the patient is pregnant at the time of the evaluation
   i. Describe the effects of pregnancy on the diagnosis, evaluation, and progress of cervical intraepithelial neoplasia.
   ii. Describe the possible effects of cervical intraepithelial neoplasia on the pregnancy.
   iii. Discuss the rationale for conservative management of cervical intraepithelial neoplasia, list the various techniques available and describe the indications, values and limitations of each.

MATERNAL MORTALITY

Terminal Objective:

Given appropriate data from a health care delivery unit (such as a hospital, city or state), the resident should be able to calculate the maternal death rate and to identify nonmedical factors that influence maternal mortality.

Enabling Objectives:

1. Define the maternal death rate.
2. List the leading causes of maternal death.
3. Define a direct obstetric, indirect obstetric, or non-obstetric death.

PERINATAL MORTALITY AND MORBIDITY

Terminal Objective:

Given appropriate data, the resident should be able to calculate the statistics relevant to pregnancy outcome, analyze neonatal records to identify the factors causing perinatal mortality and morbidity, suggest preventive measures, and identify non-medical factors that may influence perinatal mortality and morbidity.

Enabling Objectives:

1. Define fetal death, neonatal death, infant death, perinatal mortality rate, neonatal mortality rate, and infant mortality rate.
2. List the common causes of fetal death, give common causes of neonatal death, and indicate how each may be prevented.
3. Outline a program of investigation to determine the cause of previous losses in a woman who has had multiple perinatal deaths.
4. Develop a management program for the next pregnancy that will provide maximum safety for the infant of such patient.
5. List major causes of immediate and remote infant morbidity, and describe how each might be prevented.
6. List and describe the socioeconomic, environmental, cultural and geographic factors that may influence perinatal mortality.
7. Discuss the advantages and disadvantages of using infant mortality as an index of the quality of health care.
8. Discuss the effects of regionalization of perinatal care on perinatal mortality and morbidity.
9. Discuss the best approach and management plan to help parents deal with the death of a fetus or infant or with the birth of a congenitally malformed infant.

LITERATURE AND RESEARCH

Terminal Objective:

The candidate should acquire the basics of critical appraisal of the literature.

Enabling Objectives:

1. Should be able to describe the following study designs:
   i. Controlled/uncontrolled
   ii. Retrospective/prospective
   iii. Cohort
   iv. Randomized
2. Should demonstrate ability to interpret Odds ratios and Confidence Intervals.
3. Describes the rational for and the basic techniques used in developine meta-analysis.

SURGICAL/TECHNICAL CAPABILITY

Terminal Objective:

The resident should be able to perform the surgical procedures listed under the content of the senior years of residency (Table 3 page 23).

Enabling Objectives:

1. Discuss the emotional impact, of each of those operations on the patient and her husband.
2. Describe the gross anatomic relations among the structure within the pelvis, including lymphatics, vascular supply, and course of the ureter.
3. Describe the necessary preoperative preparation.
4. List the common complications and their management.
5. Outline the principles of postoperative care.
6. Demonstrate the ability to manage the actual preoperative, operative and postoperative care.