

FETAL MEDICINE FELLOWSHIP ONE-YEAR COURSE

Course Objectives:

1. To be able to use the ultrasound scan machine effectively.
2. To understand normal and abnormal development in a fetus.
3. To be able to interpret findings on a scan and reach a reasonable diagnosis.
4. To be able to manage common abnormalities integrating the various modalities of investigation for perinatal diagnosis.
5. To be able to liaise with the appropriate departments as dictated by the case and make effective use of the current knowledge and technology available.
6. To be able to provide appropriate pre-pregnancy and perinatal advice to prospective parents.
7. To be able to critically assess available literature and interpret current papers to suit the needs of the patient and the population.
8. To be able to integrate oneself and work as a team showing due respect to colleagues and contribute effectively to the team.
9. To attempt publication of case reports and other review/research articles.

ELIGIBILITY:

The following criteria need to be fulfilled:

1. Post graduate degree in Obstetrics and Gynecology
2. A minimum of one year's training in Obstetric Ultrasound

The candidates will be selected by interview to ascertain their suitability for the course.

They are expected to have a sound knowledge in the basic sciences in obstetrics and gynaecology, namely:

1. **Maternal Physiology**
2. **Fetal Physiology**
3. **Medical complications of pregnancy**

SYLLABUS FOR FETAL MEDICINE FELLOWSHIP COURSE (ONE YEAR)

The fellows will go through the following modules during the one-year course. The details of these modules are listed in Appendix

MODULE 1 Basics of Fetal Medicine

Relavant Physics of Ultrasound
Embryology and fetal development

MODULE 2 Core Fetal Medicine Subjects

Perinatal Genetics
Fetal abnormalities and its management
Prenatal Diagnostics and therapy
Perinatal Pathology

MODULE 3 Clinical Obstetrics

Multiple Pregnancies
Antenatal Complications
Perinatal Infectious Diseases

MODULE 4 Personal Development and managemenmt skills

Communication, team building and management
Critical Appraisal Skills.

APPENDIX

Module I

Physics of Ultrasonography (USG)

1. Terminology, Physical & Technical principles
2. USG equipment - knobology
3. Transducers, Real time ultrasound techniques
4. Scanning methods
5. Doppler

Embryology and Fetal development

1. General embryology
2. Ovulation to implantation
3. Development of germ disc, yolk sac and trophoblast
4. Development of placenta and membranes
5. Timing and normal development of main organ systems
6. Basic principles of teratogens
7. Mechanism of teratogenesis
8. Effects of possible teratogens – drugs, infection, radiation

Module – 2

Core fetal medicine subjects

1. Perinatal genetics
2. Basic principles of genetics
3. Genetics disorders
4. Chromosomal disorders (including screening, diagnosis and management)
5. Multiple anomalies and syndromic disorders

Fetal abnormalities and its' management

1. CNS anomalies
2. Cardiac anomalies
3. Genito urinary anomalies
4. Pulmonary abnormalities
5. Neck and face anomalies
6. Skeletal anomalies

7. Fetal tumors
8. Fetal hydrops
9. Multiple pregnancies
10. Disorders of amniotic fluid
11. Management options including termination of pregnancy
12. Preconception counseling

Antenatal Screening, Prenatal diagnosis & Therapy

1. Invasive Tests– Amniocentesis, Chorion Villous Sampling
2. Maternal serum screening (AFP, BhcG, Estriol, Papp- A)

Perinatal pathology

Analysis of fetal and placental tissues

Module – 3

Clinical Obstetrics

1. Multiple pregnancies – Twins, Triplets and more
2. Antenatal complications – IUGR, Chorioamnionitis, premature rupture of membranes, intrauterine fetal death.
3. Perinatal infectious diseases – Toxoplasmosis, CMV, Herpes, HBV, HIV, HPV, Rubella, Parvovirus, streptococcal infection and syphilis.

Module 4

1. Communication, teambuilding and management skills.
2. Critical appraisal skills.

Assessment

- Logbook of cases observed and treated along with comments on competence by supervisor.
- Clinical Scenario Evaluations.
- Publications in national/international journals.
- Project
- Exit Exam – OSCE structure

The External examiners will be chosen from the fetal medicine specialty.

Fee Structure

The candidates have to pay the examination fee of Rs.10,000/- to the centre of examination.

Recommended Reading:

1. Text Book of Obstetric Medicine by Catherine Nelson Piercy.
2. Medicine of the fetus & mother by Reece & Hobbins
3. Fetology by Bianchi, Cromblehome, D'alton
4. The unborn patient by Harrison, Evans, Adzick, Holzgrieve
5. The Developing Human : Clinically oriented Embryology by Moore
6. Practical Genetic Counseling by Peter Harper
7. Genetic Disorders & The Fetus : Diagnosis, Prevention & Treatment
8. Diagnostic Ultrasound of Fetal Anomalies – by David A Nyberg et al.
9. Fetal Medicine Basic Science and Clinical practice – Charles H. Rodeck. Martin J whittle
10. A Practical Guide to Fetal Echocardiography – Alfred Abu Hamad.