

Dr.NTR University of Health Sciences

Vijayawada

SYLLABUS

**“POST DOCTORAL FELLOWSHIP
COURSE IN OBSTETRIC MEDICINE”**

for the academic year 2018-19

FELLOWSHIP COURSE IN OBSTETRIC MEDICINE

1. **Proper name of the course:** Fellowship course in Obstetric Medicine
2. **Duration of the course:** One year
3. **I. Eligibility criteria for admission:** M.D OBG/DNB OBG recognized by the Medical Council of India / National Board of Examinations.

II. Intake capacity: 2 per year

4. Complete curriculum of the course:

4.1. Statement of Goals & Specification of Objectives:

A. Goal:

The goal of this curriculum is to create a cadre of Obstetricians who can take care of pregnant women with significant medical conditions which influence the course of pregnancy and are likely to interfere with her safe delivery.

- i) Provide the fellow with didactic and clinical training regarding advanced knowledge in the medical and surgical complications of pregnancy and their effect on both mother and fetus.
- ii) Enable the fellow to develop expertise in the most current diagnostic and treatment modalities utilized in the care of patients with pregnancies at risk as well as advanced knowledge of the newborn adaptation so there will be a continuum of excellence of care from the fetal to newborn period.
- iii) Carry out research in Obstetric medicine

B. Objectives:

After completion of fellowship course in Obstetric medicine, the obstetrician should be able to fulfil the following objectives.

- i) To provide necessary care to pregnant women with medical complications necessitating medical intervention in view of continuation of her pregnancy and safe delivery.
- ii) To organize and implement different health care programs for the pregnant women
- iii) To conduct research to improve health care of the pregnant women with medical illness.

4.2. Course Content:

4.2.1. Low Risk Maternal and Child Health Care

- Diagnosis of pregnancy
- Maternal normal pelvis and foetal skull

- Posture, lie, presentation, position of foetus for birth
- Dawn advanced antenatal care

4.2.2. Maternal Physiology

- Metabolism and nutrition
- Fluid, electrolyte and acid base balance
- Cardiopulmonary function
- Haematological, digestive and urinary systems
- Immune mechanisms
- Clinical aspects of normal pregnancy: physiological flow murmurs, edema, physiological anaemia, varicosity, acne, hirsutism, goitre.
- Demographic, sociologic and environment factors affecting pregnancy
- Alterations in laboratory normal values in normal pregnancy

4.2.3. Maternal Endocrinology

An understanding of the structure, function, metabolism, synthesis and principles of assay of hormones from the:

- Hypothalamus and pituitary
- Thyroid, pancreas, parathyroid
- Adrenal cortex and medulla
- Ovary
- Placenta

4.2.4. Minor ailments of pregnancy:

- Early pregnancy nausea and vomiting
- Constipation
- Dyspnoea of pregnancy
- Oesophageal reflux
- Back pain
- Headache
- Entrapment neuropathies E.g. Carpal tunnel syndrome, meralgia paraesthetica
- Syncope and presyncope
- Palpitations
- Oedema

4.2.5. Pre-existing medical disorders:

- Preconception counseling
- Interpregnancy care
- Management during pregnancy – e.g. valvular heart disease
- Pregnancy effects on the disease
- Fetal implications of the disease – e.g. thyroid disorders
- Potential intra partum complications – e.g. cardiomyopathy
- Potential post partum complications

4.2.6. Medical disorders arising in pregnancy:

- Hypertension – preeclamptic or otherwise
- Preeclampsia and eclampsia
- Renal disease and UTI
- Cardiac disease – congenital heart disease, rheumatic heart disease, ischemic heart disease, artificial valves, arrhythmias
- Hepatic disease – viral hepatitis, alcoholic hepatitis, chronic active hepatitis, cirrhosis, cholestasis, fatty liver of pregnancy.
- Respiratory disease – asthma, sarcoidosis, cystic fibrosis, restrictive lung disease (kyphoscoliosis), tuberculosis, pneumonia, respiratory failure/ARDS, Pneumothorax
- Diabetes – type I and Type II, gestational diabetes
- Other endocrinal disorders – thyroid disease, parathyroid disease, pituitary disease, adrenal disease and Addison's disease, postpartum thyroiditis, lymphocytic hypophysitis, diabetes insipidus
- Neurological disease – epilepsy, migraine, multiple sclerosis, myasthenia gravis, benign intracranial hypertension, Bell's palsy, carpal tunnel syndrome, haemorrhagic and non-haemorrhagic stroke, cerebral vein thrombosis
- Connective tissue disease – systemic lupus erythematosus, antiphospholipid syndrome, rheumatoid arthritis, mixed connective tissue disease, scleroderma.
- Haematological disease – anaemia, haemoglobinopathies, haemophilia, thalassemia, sickle cell anaemia, von Willebrand's, idiopathic thrombocytopenic purpura (ITP), disseminated intravascular coagulation (DIC)
- Thromboembolic disease – previous Venous Thromboembolism, thrombophilia, Deep Vein Thrombosis, Pulmonary Embolism.
- Chronic psychiatry disease – anxiety, depression, bipolar affective disorder, schizophrenia, postnatal depression, puerperal psychosis.
- Skin disease – eczema, psoriasis, acne, polymorphic eruption of pregnancy, prurigo/pruritic folliculitis, pemphigoid gestations, leprosy
- Neoplastic disease – breast cancer, ovarian cancer, malignant melanoma, lymphoma.
- Substance abuse – Opiates, Cocaine, benzodiazepines, amphetamine
- Infectious diseases in pregnancy including STD's, AIDS, intrauterine infection
- Complicated MTP/criminal abortion

4.2.7. Genetics

- Common chromosomal anomalies
- Genetic disorders
- Multifactor organ dysgenesis
- aneuploidy
- Karyotyping
- Cytogenetic and molecular techniques for diagnosis
- Amniocentesis
- Counseling

4.2.8. Drugs – teratogens, steroids, immunosuppressive drugs, drugs safe in pregnancy and puerperium, drugs contraindicated in pregnancy and puerperium.

4.2.9. Fetal Physiology and Endocrinology

- Normal fetal growth patterns & the factors regulating fetal growth
- The physiological processes of maturation of fetal organs
- Fetal cardio pulmonary physiology including regulation of the fetal heart rate, oxygen and carbon dioxide transport and the fetal response to hypoxia
- The patterns of fetal activity, including fetal movements and fetal breathing movements
- The mechanisms of regulation of the volume and composition of the amniotic fluid
- The factors involved in the initiation of parturition
- The fetal cardio respiratory and endocrine responses to birth

4.2.10. High risk neonate - Preterm baby, small for date baby, asphyxia, meconium aspiration, neonatal convulsion, birth injuries, neonatal jaundice, alimentary disorders, perinatal infection, congenital defect, acute neonatal resuscitation and care.

4.2.11. Diagnostic techniques in pregnancy – ultrasound, Doppler studies, amniocentesis, chorion villus sampling, percutaneous fetal blood sampling, intrauterine transfusion.

4.2.12. **General Topics:**

- Research methodology
- Teaching methodology

5. TEACHING SCHEME:

5.1 Teaching Learning Methods and Activities:

Learning in fellowship program shall be essentially “Autonomous & Self directed”.

The following organized learning experiences should be provided to the students. Time table for these programs will be drawn every six months.

The academic activities in the hospital include:

- High risk antenatal case discussions weekly once
- Journal club once in a month
- Perinatal mortality and morbidity meeting once in a month
- Clinico-pathological conference once in a month
- Audit once in a month
- Subject seminars once in a month
- CRM meet once in a month
- Symposium once in two months
- Guest faculty talk etc
- Paper presentations audits/projects thesis
- Conferences/workshops
- Attendance of BLS/ALS certification courses is encouraged
- Clinical rounds
- Research conference at state level - 1
- Research conference at national level - 1

5.2. Training program:

Clinical rotations will be in the following specialized fields:

Core high risk obstetric module: 7 months

Pathology & genetics – 2 weeks

Critical care module - 2 weeks

Endocrinology - 1 week

Rheumatology - 1 week

Hematology - 1 week

Psychiatry - 1 week

Gastroenterology - 1 week

Cardiology - 1 week

Nephrology - 1 week

Pulmonology - 1 week

Fetal medicine - 1 month

Neonatology - 1 month

5.3 Log book

The fellows shall maintain a Record Book (Log Book) of the work carried out by them on day to day basis & training program undergone during the period of training including details of procedures carried out independently or assisted by the candidate. The log book will be checked by the faculty members imparting the training. Candidates will be required to produce log book duly certified by the guide at the time of practical examination.

6. Text books and reference books:

- Creasy RK, Resnick R, Maternal-Fetal Medicine: Principles and Practice
- De Swiet M, Medical Disorders in Obstetric Practice.
- Burrow Duffy, Medical Complications during Pregnancy
- John T Queenan, Protocols for high risk Pregnancies 4th edition
- Rodeck CH, Whittle MJ (eds.). Fetal Medicine: Basic science and clinical practice.
- James DK, Steer PJ, Weiner CP, Gonik B. High-Risk Pregnancy: Management options.
- Keeling JW (ed.). Fetal and Neonatal Pathology
- Nyberg DA, Mc Gahan JP, Pretorius DH, Pilu G. Diagnostic Imaging of Fetal Anomalies. Philadelphia: Lippincott Williams and Wilkins, 2003.
- Gardiner RJM, Sutherland GR. Chromosome Abnormalities and Genetic Counseling.
- Harper PS. Practical Genetic Counseling. Boston: Butterworth-Heinemann, 1998 (5th ed.).
- Remington JS, Klein JO. Infectious Disease of the Fetus and Newborn Infant. Philadelphia: Saunders, 1976.
- Thorburn GD, Harding R. Textbook of Fetal Physiology. Oxford: Oxford University Press, 1994.
- Hand book of obstetric medicine, 4th ed, Catherine Nelson Piercee
- Maternal medicine: medical problems in pregnancy, I.Greer.
- Critical care obstetrics, 5th ed, Michael Belfort, George Saade
- Obstetric intensive care manual, 3rd ed, M.R.Foley.

- Management of acute obstetric emergencies, Baha M Sibai
- Text book of obstetric anaesthesia, David chestnut, 4th ed.
- Anaesthetic and obstetric management of High risk pregnancy, 3rd ed, Sanjay Dutta

7. *List of Journals (Previous three years):*

- ISOM, journal of Obstetric anaesthesia and critical care
- Obstetric Medicine - The Medicine of Pregnancy: Editors - Sandra Lowe Catherine Nelson- Piercy