INDIAN ACADEMY OF MEDICAL GENETICS

(Administered by society registered under the Societies Act XXI of 1860)

Test Treat Teach

COURSE CURRICULUM

Broad categories	Topics to be covered	Details of Topics
Basic Genetics	a. Mendelian disorders b. Chromosomal disorders and Cytogenetics c. Developmental genetics d. Embryology and Teratology	a. Academic session b. Practical exposure to search of teratology databases- print and online
Clinical Genetics	a. Family history and Pedigree analysis b. Dysmorphology and Syndrome diagnosis c. Indications for genetic testing and prenatal diagnosis d. Pre-conceptional and Prenatal counselling	a. Academic session/Bedside learning b. Outpatient clinics with exposure to all relevant clinical scenarios especially related to obstetrics c. Participation in counselling sessions
Antenatal ultrasonography in context of genetic evaluation	a. Nuchal and early anomaly scan abnormalities- syndromic diagnosis and genetic evaluation b. Abnormalities on Targeted anomaly scan- syndromic diagnosis and genetic evaluation c. Approach to individual ultrasound abnormality w.r.t genetic diagnosis and testing	a. Academic session/bedside learning b. Observation of ultrasounds in-house or through rotational postings with emphasis on genetic evaluation and syndrome diagnosis c. Preparation of ultrasound report w.r.t. counselling for abnormal ultrasound findings
Invasive diagnosis – Indications and appropriate sample collection	a. Amniocentesis- Indications, risks and adequate sample collection and transport b. Chorionic villus sampling- Indications, risks and adequate sample collection & transport	a. Academic session/Bedside learning b. Observation (and assistance, as per institute policies) of invasive procedures c. Pre-test counseling
Anueploidy screening- pre and post test counseling and report interpretation	a. Maternal serum screening b. Ultrasonography markers for aneuploidy c. Non-invasive prenatal test	a. Academic session /Bedside learning b. Pre and post test counseling c. Interpretation of serum screening reports d. Practical approach to counseling of high risk patients

COURSE CURRICULUM

Laboratory genetics- test ordering and interpretation	Cytogenetic techniques- Karyotype, FISH, MLPA, QF-PCR, Microarray a. Molecular genetics- PCR, Sanger sequencing, Next generation sequencing b. Biochemical genetics- HPLC, TLC, Enzyme assays	a. Academic session/benchside teaching b. Observation of lab experiments c. Indications of test, ordering ,sample collection d. Complexities in interpretation of laboratory results in prenatal setting e. Complexities in counseling during prenatal testing
ELSI	a. Psychosocial, ethical and legal aspects of prenatal genetics b. Genetic counselling	a. Academic session/bedside teaching b. Participation in counselling sessions and actual cases scenarios during outpatient clinics
Fetal autopsies	a. Indications and Technique of fetal autopsy b. Dysmorphology and syndrome diagnosis in fetuses	a. Academic session/benchside learning b. Observation (and hands on experience as per institute policies) of performing autopsies c. Observation of histopathology of fetal organs in collaboration with pathology department
Research methodology	a. Introduction to clinical and laboratory research methodologies b. Research in the field of prenatal genetics	a. Encouragement to write a manuscript based on interesting cases observed during training
Relevance in Public Health	a. Population screening for genetic disorders b. Birth defects prevention c. PNDT act d. Genetic education for laypersons, community and other health professionals	a. One Academic session b. Carrier screening for genetic disorders in actual outpatient scenario