

Syllabus for Fellowship Course in Reproductive Medicine (1 Year course)

Expectations at the end of the course, the trainee should be able to:-

Female Infertility:

- Take an appropriate history and examine the woman.
- Evaluate, describe, diagnosis and plan therapy for: ovulatory disorders: including use of basal body temperature, plasma progesterone and endometrial biopsy; diagnosis of causes of anovulation: syndromes of inappropriate prolactin secretion, CNS hypothalamic- pituitary syndromes and other causes.
- Selection of ovulation induction utilizing antioestrogens, gonadotrophins, dopamine agonists, GnRH, GnRH analogues and other agents;
- Tubal disorders: including correct use of and interpretation of studies of tubal function (e.g., ultrasound, hysterosalpingography and laparoscopy); indications for tubal reparative procedures including micro-surgery/ or laparoscopic surgery, versus assisted conception;
- Endometriosis and other peritoneal disorders: including diagnosis and staging of endometriosis and other peritoneal causes of infertility; knowledge of the medical management of endometriosis;
- Cervical factors: including tests for sperm/cervical mucus interaction and possible therapy; artificial insemination including the indications and contra-indications;
- Adoption: including the indications for adoption; knowledge of appropriate counselling methods;
- Familiarity with various local agencies and legal implications dealing with adoption.
- Surrogacy: indications, knowledge of appropriate counselling methods.

Male Infertility:

The trainee should be able to take an

- Appropriate history and examine the man, including detailed genital examination and arrange /perform appropriate investigations and treatment.
- The trainee should understand and be able to discuss:- the formation and content as well as examination of the seminal fluid;
- The cycle of spermatogenesis, including endocrinological control mechanisms, its abnormalities and the effects of drugs;

- The physiology and Pathophysiology of sexual function; causes of azoospermia and aspermia; the biosynthesis of oestrogens, androgens and progestogens by the human testis and the biological action of testosterone in man;
- Investigation, diagnosis and therapy of infection of the male reproductive system;
- cryobiology of semen, counselling of donors and recipients of DI, sperm banking;
- In vitro and laboratory tests of sperm function e.g., mucus penetration, biochemistry etc.;
- The value and limitations of testicular biopsy and endocrine assessment such as plasma FSH;
- The physiology of endocrine and gametogenic function of the testes and accessory glands.
- Indications and methods of assisted fertilization, including intracytoplasmic sperm injection;
- Methods of surgical sperm retrieval.

Psychosexual Aspects of Reproductive Medicine Objectives:

- The trainee should understand and be able to discuss:-
- The psychodynamics of growth and development, puberty and the establishment of the gender role.
- The psychological changes associated with treatment of infertility.

In-Vitro Fertilisation (IVF) and other Assisted Reproduction Techniques Objectives:

The trainee should be competent for independent clinical practice in:

- Conditions for which IVF and related techniques of assisted reproduction are appropriate.
- Determination of the menstrual cycle to plan synchronization.
- Follicular stimulation and monitoring by ultrasound, steroid and peptide assays.
- The timing of oocyte aspiration, laparoscopic, and ultrasound based procedures.
- In-vitro gamete transport, maturation and fertilization.
- Surgical and non-surgical methods of sperm retrieval and their use in assisted fertilization.
- Timing and methods of embryo transfer.
- Monitoring of implantation.
- Assessment of genetic abnormalities and their potential treatment.
- Relevant aspects of cryobiology.
- Psychological assessment and management of gamete donors and recipients.

- Ethical and Legal Aspects of ART

The trainee should be able to discuss the ethical and legal aspects of the clinical practice of their Subspecialty and should have particular knowledge of the relevant areas listed below:-

- Legislation, particularly recent, relevant to their subspecialty practice.
- Ethics of health care provision and resource allocation.
- Medical confidentiality.
- Consent.

QC, QA and Record keeping in ART –

- Setting up of an ART Lab
- Equipment required for setting an ART Lab
- Quality Assurance & quality control in ART laboratory

Recommended books and Journals:

1. Journals
 - a) Fertility and sterility
 - b) Human reproduction
 - c) Human reproduction update
 - d) Reprod Biomed outline.
2. ART
 - e) David Garden
 - f) Vergese
 - g) Altus
 - h) Frozen Life
3. Infertility Management
 - i) Ultrasound
 - j) Endoscopy
 - k) ICMR guidelines