

# MCh (Endocrine Surgery) Curriculum

## 1. Learning outcomes

A candidate joining MCh (Endocrine Surgery) is expected to develop his/ her competencies in knowledge, skills, attitude and communication pertaining to management of Surgical Endocrine and Breast disorders.

At completion, the candidate must be able to perform diagnostic workup for the endocrine and breast disorders including the genetic evaluation and functional imaging along with having adequate knowledge about the comprehensive management of various disorders. At end of three years of MCh training program, the candidate must be able to perform independently safe thyroid surgery (open and endoscopic), parathyroidectomy (focused and bilateral neck exploration), adrenalectomy (open transperitoneal, laparoscopic, retroperitoneoscopic approaches), enucleation of insulinomas, management of MEN Syndromes, excision and wide local excision for breast lumps, mastectomy (simple, modified radical), breast conservation surgery, oncoplastic breast surgeries, LD Flap reconstructions, skin grafting, surgery for parotid and diabetic foot ulcers.

## 2. Syllabus

Syllabus includes basics like anatomy, physiology, embryology to diagnosis, workup and surgical management of:

- **Thyroid**- benign, toxic goiters, thyroiditis, malignant thyroid lesions, lymph node dissection, sternotomy for mediastinal dissection or in retrosternal goiters.
- **Parathyroid**: Primary hyperparathyroidism, secondary and tertiary hyperparathyroidism, familial hyperparathyroidism disorder syndromes.
- **Adrenal**: Conn's adenoma, Cushing's syndrome, Pheochromocytoma, Adrenocortical Carcinomas, Adrenal myelolipomas, teratomas, granulomatous adrenal lesions.

- **Endocrine pancreas:** insulinoma, gastrinoma, VIPOMA and other neuroendocrine tumors.
- **Benign breast diseases:** fibroadenomas, mastalgia, cysts, phyllodes tumors, breast hypertrophy, Gynecomastia.
- **Breast cancer:** early, locally advanced and metastatic - management including systemic therapies, surgeries.
- **Parotid** and Diabetic foot ulcers.

### 3. Teaching learning methods

- Bed side teaching in wards
- Outpatient clinics teaching
- Hands on skills in operating rooms
- Seminars
- Latest update Guidelines discussions
- Journal clubs
- Case presentations
- Case based scenarios
- Debates
- Online webinars
- OSCE, OSPE
- Hands on skills on performing Ultrasound of Neck and Breast
- Use of intra-operative adjuncts like neuromonitoring, sentinel lymph node biopsy, parathyroid gland visualisation using Fluorescein dye, energy devices, frozen section or imprint analysis, IOPTH assay.
- National and international conference presentations and observerships.
- Learning resource materials given to candidates prior to each teaching session.
- Surgical videos
- Basic biomedical research methodologies course

#### **4. Interdisciplinary training**

- Tumor boards (weekly)- with Surgical Oncology, RadiationOncology, Medical Oncology, Pathology and other specialities.
- Endocrine- Pathology sessions
- Endocrine- Radiology discussions
- Endocrine- Nuclear medicine discussions
- Tele sessions with other institutions.

#### **5. Assessment methods**

- Formative
- Summative
- Feedbacks (Google forms) at end of each teaching sessions
- MCQs, OSCE, OSPE, Theory questions, Long and short Case presentations.