

Curriculum for M.Ch. (Pediatric Surgery):

1. Basic sciences as applied to Pediatric Surgery

- Medical genetics and gene therapy.
- Antenatal diagnosis and fetal intervention
- Developmental and transitional physiology of the respiratory, cardiovascular and renal systems
- Neonatal physiology and assessment of the surgical neonate.
- Neonatal sepsis
- Nutrition – enteral, parenteral
- Vascular access
- Principles of imaging (radiodiagnosis, nuclear) in Pediatric practice
- Pharmacology and use of common drugs, antibiotics and policy
- Pediatric analgesia and anaesthesia, critical care, mechanical ventilation
- General principles of Endoscopy and Minimal Access Surgery – fetoscopy, genitourinary endoscopy, tracheo-bronchoscopy, laparoscopy, thoracoscopy, robotic surgery
- Biomedical ethics and legal issues in Pediatric surgical practice.
- The organisation of a Pediatric Surgical unit
- HIV/AIDS in children
- National health policy-programs pertinent to Pediatric practice
- Telemedicine and telesurgery - principles, practice and limitations

2. Trauma

- Birth trauma
- Pediatric trauma – general principles.
- Thoracic, abdominal, genitourinary, central nervous system trauma
- Soft tissue and envenomation injuries

- Musculoskeletal and vascular trauma
- Burns
- Child abuse.

3. Pediatric Oncology

- General principles of oncology, radiotherapy and chemotherapy
- Wilms' tumor
- Neuroblastoma
- Liver tumours
- Rhabdomyosarcoma
- Germ cell tumours
- Other tumor of childhood (outline)-Leukemias, Lymphomas, Bone tumours, CNS tumours,
- Retinoblastoma

4. Transplantation

- General principles
- Kidney and liver transplantation
- Outline of other solid organ and bone marrow transplantation

5. Head and Neck Disorders

- Craniofacial anomalies
- Cleft lip and palate
- Disorders of the upper airway and oral cavity.
- Salivary glands
- Disorders of lymph nodes.
- Thyroid and parathyroid gland
- Cysts and sinuses of the neck
- Torticollis

6. Thoracic Disorders

- Congenital chest wall deformities.
- Disorders of the breast.
- Diaphragmatic hernia and eventration
- Mediastinal mass lesions.
- Endoscopy of the upper aerodigestive tract.
- Congenital tracheal and Bronchopulmonary/ foregut malformations
- Infective pleuro-pulmonary condition.
- Congenital oesophageal anomalies
- Oesophageal motility disorders, achalasia cardia , gastro-esophageal reflux
- Oesophageal rupture, injury, stricture, perforation.
- Oesophageal replacement.

7. Abdominal Disorders

- Umbilical disorders and abdominal wall defects.
- Inguinal hernias and hydroceles
- Testicular maldescent, torsion
- Hypertrophic pyloric stenosis.
- Duodenal atresia, annular pancreas.
- Jejunioileal atresia and stenosis
- Meconium ileus
- Meckel's diverticulum
- Intussusception.
- Disorder of midgut rotation.
- Short bowel syndrome
- Gastrointestinal endoscopy and laparoscopy.
- Gastrointestinal bleeding

- Gastrointestinal duplications.
- Mesenteric and omental cysts
- Ascites
- Polypoid disease of the GIT
- Necrotising enterocolitis
- Intestinal stomas
- Primary peritonitis.
- Inflammatory bowel disease in children.
- Colonic atresia and functional obstruction.
- Appendicitis
- Hirschsprung disease, neuromuscular disorders of intestines
- Anorectal malformations.
- Congenital short colon /pouch colon
- Colonic and rectal tumours
- Neonatal/Infantile obstructive cholangiopathy
- Congenital biliary dilatation.
- Infective and inflammatory hepatobiliary disorders
- Benign liver tumours
- Portal hypertension
- Disorders of the pancreas
- Splenectomy and post-splenectomy sepsis.
- Adrenal gland.

8. Genitourinary and related disorders

- Renal agenesis, dysplasia, cystic disease, ectopia
- Pelvic ureteral junction obstruction
- Vesicoureteric reflux

- Infective and inflammatory renal disorder.
- Pediatric urolithiasis
- Congenital ureteric anomalies.
- Prune belly syndrome
- Urinary diversion and undiversion, bladder augmentation
- Disorders of bladder function.
- Structural bladder disorders
- Exstrophy – epispadias complex
- Hypospadias.
- Anomalies of the external genitalia
- Disorders of Sex Differentiation
- Abnormalities of the female genital tract.

9. Miscellaneous Pediatric Surgical Disorders

- Spina bifida / Hydrocephalus
- Congenital heart disease
- Congenital orthopaedic deformities
- Amputation, bone and joint infections
- Conjoined twins
- Hemangiomas & vascular malformations.