SCORE LEARNING OBJECTIVES – PEDIATRIC SURGERY

Children's of Atlanta Hospital at Scottish Rite

A. Goals and Objectives

The goal of the pediatric surgery rotation is to train general surgery residents to manage routine pediatric surgical problems themselves and to equip them with a basic understanding of complex pediatric surgical problems which will require referral to specialty centers. After completing the rotation on pediatric surgery, we expect the resident to be cognizant of the physiology of the newborn infant and children with respect to fluid and electrolyte management, nutritional therapy, and common drug therapies. We expect them to have the basic understanding of newborn surgical emergencies, especially those related to the respiratory, gastrointestinal, and genitourinary systems as well as to the anterior abdominal wall and diaphragm. They should have a basic understanding of pediatric oncology, in particular Wilms tumor and neuroblastoma. They should be fully competent in the initial resuscitation and stabilization of the pediatric trauma patient. The residents should be exposed to new technological procedures such as extracorporeal membrane oxygenation, and laparoscopic and thoracoscopic procedures. We expect the residents to strengthen their communications skills in dealing with children and parents and to strengthen their teaching skills through their interactions with junior house officers and students.

B. Methods to Accomplish Goals and Objectives

In order to accomplish these goals and objectives, the resident is exposed to a rich clinical environment as well as to a comprehensive didactic curriculum during their rotations on the Pediatric Surgery Service. Clinically, continuity of care is emphasized by having the resident participate in the outpatient clinics in order to evaluate pre- and postoperative patients and in the operating room to assist with all surgical procedures. The residents are given an increasing level of responsibility during their first and fourth years of training. All of these activities are supervised by the attending staff. The residents are exposed to an ample number of pediatric surgical cases which vary in scope from simple umbilical hernias to orthotopic liver transplantation. The resident is responsible for the initial history and physical examination of each patient, performing the operation or assisting the attending surgeon in the operating room, documenting the patient's postoperative course while in the hospital, and for participating in postoperative follow-up after discharge from the hospital.

With respect to the didactic portion of the rotation, we have a formalized course which covers all of the major topics in pediatric surgery during the resident rotation. The residents are given the schedule ahead of time in order to prepare for the weekly discussion which is led by an attending surgeon. The residents also participate in a weekly morbidity and mortality conference, weekly pediatric x-ray conference, weekly tumor board, weekly formal attending rounds (in addition to daily attending "work" rounds), a biweekly gastroenterology conference with one week discussing GI pathology and the alternate week discussing GI radiology, a monthly pediatric surgical pathology conference, and a monthly journal club. Finally, the senior resident organizes and presents the weekly pediatric surgery conference for the surgical and pediatric house officers, pediatric and surgery attendings, and nurses.

The learning objectives listed below are based on the SCORE learning objectives. They evaluate key knowledge points for any general surgeon, regardless of specialty. At the end of PGY-4, residents will:

Medical Knowledge and Patient Care & Procedural Skills

1. HYPERTROPHIC PYLORIC STENOSIS

a. Describe the incidence, gender predilection, and familial occurrence pattern of HPS.
b. Describe the typical presentation of HPS (history and physical exam).
c. Describe the electrolyte abnormalities (serum, urine) in HPS and the appropriate fluid resuscitation for these patients.
d. Describe diagnostic/radiographic studies to confirm diagnosis.
e. Describe the operative treatment for HPS (approach, anatomy).
f. Describe management strategy in event of mucosal perforation during pyloromyotomy.

2. INGUINAL HERNIA

a. Describe anatomy of an inguinal hernia
b. Describe the typical presentation of an incarcerated inguinal hernia (history and physical exam).
c. Describe the difference in presentation and management of inguinal hernias and communicating/non-communicating hydroceles.
d. Describe the surgical approach and key elements of pediatric inguinal hernia repair
e. Describe the difference between a recurrent hernia and post-operative hydrocele.

3. INTUSSUSCEPTION

a. Describe the age predilection of intussusception.
b. Describe the typical presentation of a child with intussusception (history and physical exam).
c. Describe the suspected causes for intussusception in a patient inside and outside the typical age range (common lead points).
d. Describe the imaging studies used to diagnose intussusception.
e. Describe the decision and techniques for non-operative vs. operative management.

4. MALROTATION

a. Describe the causes of bilious emesis in a newborn.
b. Describe the typical presentation of a child with malrotation and midgut volvulus (history and physical exam).
c. Describe the imaging studies used to diagnose malrotation.
d. Describe the operative intervention for midgut volvulus (Ladd's procedure)
e. Describe the management in the setting of ischemic/non-viable intestine.
f. Describe the long-term management issues in children with short bowel syndrome.

5. MECKEL'S DIVERTICULUM

a. Describe the location of a Meckel's diverticulum and the usual presentations.
b. Describe the imaging studies used to diagnose a Meckel's diverticulum.
c. Describe the rationale for resecting simply the diverticulum vs. the adjacent small bowel.

6. THYROGLOSSAL DUCT CYST

a. Describe the differential diagnosis for a midline neck cyst in a patient.
b. Describe operative anatomy of a Sistrunk procedure.
c. Describe complications following a Sistrunk procedure.

7. AIRWAY/ESOPHAGEAL FOREIGN BODIES

a. Describe the typical presentation of a child with an airway foreign body (history and physical exam).
b. Describe the typical presentation of a child with an esophageal foreign body (history and physical exam).
c. Describe the work-up of radiodense and radiolucent foreign bodies of the esophagus and airway.
d. Describe the radiographic findings for each type of foreign body.
e. Describe the methods for extraction of each type of foreign body.

8. UMBILICAL HERNIA

a. Describe the differential diagnosis in a persistent "wet" umbilicus.
b. Describe the age criteria for repair of uncomplicated umbilical hernias.
c. Describe the steps in an uncomplicated umbilical hernia.

9. HIRSCHSPRUNG'S DISEASE

a. Describe the typical presentation of a patient with Hirschsprung's disease (history and physical exam).
b. Describe the initial management strategies in a patient who is critically ill and suspected to have Hirschsprung's disease.
c. Describe the diagnostic work-up for a patient with Hirschsprung's disease.
d. Describe the presentation, diagnosis, and treatment of Hirschsprung's enterocolitis (post pull-through).
e. Describe the different operative approaches to treatment of Hirschsprung's disease.
f. Describe the post-operative complications of a pull-through procedure for Hirschsprung's disease.

TECHNICAL OBJECTIVES

Successfully complete an umbilical hernia repair
Successfully complete a laparoscopic appendectomy

Practice-based Learning and Improvement

- Assimilate scientific evidence into patient care.
- Identify the need for improvement in one's own medical knowledge, surgical skills, and patient care and prepare an improvement plan for lifelong learning.

Professionalism

- Participate in the evaluation of patients requiring emergency room consultation.
- Identify the "team concept" of trauma care.
- Conduct himself/herself respectfully, altruistically, and ethically.
- Practice patient- and family-centered care.
- Demonstrate sensitivity to family, cultural, ethnic, age, gender, and community issues during interactions with patients, families, and members of the healthcare team.

Interpersonal and Communication Skills

- Participate in the evaluation of patients requiring emergency room consultation.
- Be the primary presenters of all emergency room treat-and-release patients.
- Present patients in a logical and concise manner.
- Effectively listen to patients and families.
- Communicate effectively with patients and families, avoiding technical terms and jargon.
- Demonstrate skill in delivering bad news to patients and family.
- Demonstrate ability to communicate and function effectively and appropriately with a trauma team.
- Maintain orderly medical records and transfer notes.
- Practice effective and efficient sign-outs to on-call residents.

Systems-based Practice

- Identify the roles and responsibilities of the surgeon in relation to those of physicians and surgeons in other disciplines and specialties, pathologists, nurses, anesthesiologists, physician assistants, pharmacists, and administration.
- Evaluate surgical disease with attention to various diagnostic tests and modalities that are used to define the type and extent of the pathology, which will determine the need for surgical intervention.