PEDIATRIC PATHOLOGY

Pediatric and Perinatal Pathology

Pediatric and Perinatal Pathology is a one-month rotation designed to learn the basics of perinatal and pediatric pathology, including autopsy and surgical pathology. Stages of development and placental pathology are also covered. Learning materials are presented in the form of journal articles, textbook reading assignments, and lectures. Pre- and Post-test exams will be administered.

Daily duties:

The resident will check the operative report for complex pediatric cases (tumors, multiple placentas, stillborns, fetopsy specimens, etc) and be available at the time of the specimen arrives into the surgical lab. The pediatric pathology resident may share responsibility with the surgical pathology resident for a pediatric pathology case. Any pertinent cases in the queue of another resident must be discussed with that resident regarding sign-out.

Pediatric unknown conference- once/month:

The rotating resident will pull slides for an unknown conference for a Thursday afternoon unknown conference. The resident will check with their attending to discuss case choices and important facts for other residents to know following conference.

Autopsy:

The rotating resident will assist other residents with sign out of all pediatric autopsies due during their rotation months. The rotating resident may be asked to present at Pediatric Mortality and Morbidity Conference on the 2nd Tuesday of the month.

Surgicals:

The rotating resident will gross and assist with sign-out of complex pediatric surgical cases.

End of the Month:

A post test will be administered at the end of the month. The results of this evaluation will be incorporated into the resident’s evaluation for the month.

Objectives for Six General Competencies

Patient Care: Understanding the proper specimen collection and processing, gathering essential clinical data, and providing appropriate consultation to clinicians.

A. Refer to the daily operative schedule for possible pediatric/perinatal cases and assist the surgical resident with complex cases (tumors, multiple placentas, fetopsies, etc).
B. Know clinical indications for submission of the placenta to pathology; refer to articles from College of American Pathologists Conference XIX on The Examination of the Placenta: Patient Care and Risk Management (September 1990)

**Medical Knowledge:**

A. Know the difference between the abortion and autopsy specimens and the implications for the causes of both.
F. Understand the diagnosis and management of Hirschsprung’s disease along with treatment outcomes.
G. Understand the findings and diagnostic considerations of sudden infant deaths.
H. Be familiar with the most common inborn errors of metabolism and diagnosis of these disorders.

**Be able to identify (included on the pre- and post-test)**

**Tumor:**
- Nephroblastoma with anaplasia
- Neuroblastoma
- Hepatoblastoma
- Teratoma
- Congenital mesoblastic nephroma
- Infantile fibrosarcoma
- Ewing sarcoma

**Placental:**
- Hemorrhagic endovasculitis
- Fetal thrombotic vasculopathy
- Hydatiform mole
- Twin-to-twin transfusion syndrome
- Funisitis
- Villitis
Perinatal: Stages of fetal lung development
- Sudden unexplained infant death
- Necrotizing enterocolitis
- Estimation of time of death using Genest articles
- Occipital osteodiastasis
- Fetal hydrops
- Ischemic brain injury
- Periventricular leukomalacia

Malformations/Syndrome: Polycystic kidney disease
- Trisomies (21, 18, 13)
- Cystic renal dysplasia
- Ductal plate malformation
- Congenital hepatic fibrosis
- Extrahepatic biliary atresia
- Beckwith-Wiedemann syndrome
- Gastroschisis
- Omphalocele
- Thanatophoric dysplasia
- Achondroplasia
- Mitochondrial myopathy
- Pompe disease
- Maple syrup urine disease
- Hurler syndrome
- Craniosynostosis
- Congenital heart disease

Practice-Based Learning and Improvement
A. Participate in teaching fellow residents and medical students rotating in anatomic pathology.
B. Perform literature searches on selected topics and interpret relevant articles using web-based and library sources.
C. Know how to apply SNOMED codes and how to use these codes to retrieve cases from the pathology archives.

Interpersonal and Communication Skills
A. Know the basic principles of transmitting the autopsy diagnosis to the clinicians in a timely and succinct way.
B. Be able to interpret the relevance of information from the coroner or other officials involved in pediatric autopsies.
C. Be able to write a concise and accurate autopsy report.
D. Prepare pediatric autopsy cases to be presented to interdepartmental conferences.
E. Prepare interesting surgical pathology cases for a monthly unknown conference in pediatric

Professionalism
A. Maximize time management and prioritization of tasks.

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B. Maintain a high level of responsibility, educating residents on other rotations about pertinent pediatric/perinatal pathology issues.
C. Understand the information relayed through the final report must be delivered in a manner sensitive to the family, patients, and other health professionals.
D. Attendance and punctuality at conferences.

**Systems-Based Practice**
A. Utilize the internet to access pathology websites (CAP, ASCP, etc) to stay abreast of current topics in pediatric/perinatal pathology and how these issues are handled at other institutions or organizations.
B. Understand the legal considerations of placental pathology and perinatal/pediatric autopsy pathology and how information technology is utilized to relay and store data from one system to another.

**Reading resources:**
Bernirschke et al. *Pathology of the Human Placenta*.
Kraus et al. *Placental Pathology*.

**Resident Assignment Checklist**
Check off each assignment when completed.
This list is a summary. See rotation objectives for full, detailed assignments.

1. Read and understand rotation objectives and assignments. ________
2. Read assigned texts/handouts/literature. ________
3. Write-up reports on pediatric/perinatal pathology cases. ________
4. Attend/prepare pediatric/perinatal pathology conferences. ________
5. Take the Perinatal/Pediatric Pathology **post-test**. ________