NDT A279: PEDIATRIC ELECTROENCEPHALOGRAPHY

Item	Value
Curriculum Committee Approval Date	11/02/2022
Top Code	121200 - Electro-Neurodiagnostic Technology
Units	2 Total Units
Hours	36 Total Hours (Lecture Hours 36)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S)

Course Description

An analysis of neonatal, and pediatric electroencephalography. This course will cover the evolution of EEG waveforms starting from the premature brain to adolescence as well as common neurological pediatric diseases and epileptic syndromes. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Evaluate EEG findings correlating to neurological conditions in the pediatric population.
2. Describe the maturation of the human brain from prematurity to adolescence using the EEG.

Course Objectives

- 1. Analyze EEG Tracings of the premature neonate to distinguish states of consciousness.
- 2. Distinguish the stages of sleep of the premature neonate, infant, and pediatric patient.
- 3. Recognize the most common normal variants in the neonatal, infant, and pediatric EEG.
- 4. Analyze EEG recordings of common epileptic syndromes/diseases in the neonate, infant, and pediatric population.
- 5. Analyze EEG recordings of neonatal, infant and pediatric neurological conditions.
- 6. Demonstrate knowledge of ACNS Guidelines for performing pediatric EEGs.

Lecture Content

Gestational Age Chronological Age Postmenstrual Age Maturation of EEG Premature 22-39 weeks GA 30-34 weeks GA 35-36 weeks GA Term (37-40) Neonate/Infant to 12 mos Pediatric +12 mos – 2 y.o. 3-4 y.o. 5-10 y.o Adolescence States of Consciousness of the neonate/infant Wake Active Quiet Transitional EEG of the Neonate/Pediatric Patient Trace Discontinu Trace Alternant Low Voltage Irregular Continuous Slow Wave Sleep Benign Variants in the Premature Neonate MODA Frontal Sharp Waves/ Transients Anterior Slow Dysrhythmia Delta Brush Temporal Sawtooth Rhythmic Delta Rolandic Sharp Positive Sharps Review of Guideline 5: Technical Standards for Pediatric EEG Abnormalities of the Neonate/ Pediatric EEG Common Pediatric Epileptic Diseases General Epilepsies Focal Epilepsies Idiopathic Epilepsies Common Infant Neurological Syndromes and associated EEG Patterns

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)

Instructional Techniques

Powerpoint presentation, patient case scenarios, discussion boards.

Reading Assignments

Journal articles and instructor handouts. (2.25 hours/week)

Writing Assignments

Research project presentation, discussion boards.

Out-of-class Assignments

Research project and presentation. Discussion boards (2.25 hrs/week)

Demonstration of Critical Thinking

Evaluation of patient case scenarios, objective exams, final exam. Evaluation of EEG tracings.

Required Writing, Problem Solving, Skills Demonstration

Project presentation, and evaluation of EEG tracings for interpretation.

Eligible Disciplines

Diagnostic medical technology-diagnostic medical sonography, neurodiagnosti...: Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience.

Periodicals Resources

1. Kuratani, J., Pearl, P.L., Sullivan, L., Riel-Romero, R., Stecker, M., San-Juan, D., Sinha, S.R., Drislane, F. and Tsuchida, T.. Guideline 5: Minimum Technical Standards for Pediatric Electroencephalography, Journal of Clinical Neurophysiology Volume 33 2016

Other Resources

1. Instructor handouts