BRAIN 2021

SESSION 14: CHILD PSYCHIATRY

The human brain is one of the most extraordinary machines in the universe. It begins from a single cell. That cell divides, and then divides again, setting off a chain of exponential growth. Approximately three weeks later, the first neural cells appear.

Over the next 9 months, the brain continues to grow at a staggering pace (an average of ~250,000 neurons/minute!). By birth, the brain will have 10^11 neurons and, by the age of three, each of these neurons will form about 7,000 synaptic connections. For the rest of development, much of the work is about pruning.

In the midst of all of this complexity, it is no surprise that things can go differently. Many psychiatric illnesses first appear in childhood. At the risk of stating the obvious, a critical point to remember is that children are not mini-adults – everything needs to be interpreted within the context of normal neurodevelopment.

With that in mind, this session's materials are all about the kiddos! Use our self-study resources to learn about some of the most common neurodevelopmental disorders of childhood. Then join your pod to dig into a case on autism!

On Your Own (watch or read)

Read:

Found in Translation: Autism Genetics and the Quest for Its Rosetta Stone

Shifting Focus: From Group Patterns to Individual Neurobiological Differences in Attention-Deficit/Hyperactivity Disorder

A Fragile Balance: Dendritic Spines, Learning, and Memory

Watch:

Childhood ADHD

Genetics, Neurodevelopment, & Child Psychiatry

"Spoken Word"

"Solving the Mystery of Autism Spectrum Disorder"

With Your Pod (Or on Your Own)

Progressive Case Conference: Autism Spectrum Disorder

Assessment

At the end of Session 14, you should be able to answer the following:

1. **Describe the genetic basis of Autism Spectrum Disorders. What constitutes standard of care workup.**
2. **Describe the neurobiological pathways thought to play a role in symptoms associated with ADHD.**
3. **What is the core pathophysiological finding seen in individuals with Fragile X syndrome?**

When you're ready, click here to submit your responses.

Fun Extras!

From Circuit to Symptoms: Understanding the ADHD Brain

"Far from the Tree"