**Assignment Topic:**

**Autistic Disorders & Neurochemical Distribution**

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What Is Autism?

* Autism is a developmental disorder characterized by difficulty with social interaction and communication and by restricted and reputative behavior.

Brief History of Autism Spectrum Disorder

Donald Gray Triplett, (born September 8, 1933), was the first diagnosed with Autism. He was first diagnosed by Leo Kanner, and was labeled as “Case 1’’

When Was Autism First Diagnosed...?

Leo Kanner of the Jon Hopkins Hospital first used Autism in its modern sense in English when he introduced the label early infantile Autism in 1943 report of 11 children while striking behavioral similarities.

Symptoms of Autism

* Abnormal Body posturing or Facial expressions.
* Avoidance of eye contact or poor eye contact.
* Behavioral Disturbance.
* Deficit in language comprehension
* Delay in learning to speak.
* Inappropriate social interaction.
* Restricted or Repetitive Movements/behavior.

Causes of Autism Spectrum Disorder

* Having an immediate family member with Autism.
* Genetic mutations.
* Being born to older parents.
* Low birth weight.
* A history of viral infection

Neurochemical Distribution

* Fragile X-Syndrome
* Alternation in the neocortical excitatory/ inhibitory, balance.
* Alternation in the long-term synaptic plasticity of excitatory synapses.
* Tuberous Sclerosis Complex
* Disruption of GABA in interneurons
* Alternation in cytoskeletal dynamics and dendrites spine structures
* Metabolic Disease
* Toxic effects of accumulation metabolites
* Reduction of myelin, neuron loss
* Alternation in dopaminergic/ serotoninergic neurotransmitter
* Chromosomal Abnormalities.
* Abnormalities in neuronal migration and brain growth
* Altered cortical organization
* Synaptic and dendrites changes
* Brain 5-HT 2A

Improved compulsivity with SSRIs in adults’ SSRIs gestational risk.

Serotonin System

* Peripheral Impact
* Good motility
* Platelet aggregation
* Interplay with immune system
* Gestational insulin production
* Electoral whole blood Serotonin
* Platelet 5-HT 2A binding
* Worsening with tryptophan depletion
* Genetical linkage to chromosome 17q in males
* Rare SLC6A4 amino acid variants.

Heritability in Autism Spectrum Disorder

* Sporadic (non-inherited) cases have been examined to identify candidate genetic loci involved in Autism.
* A substantial fraction of Autism may be highly inheritable but not inherited.
* Mutations that cases Autism is not present in the parental genome.

Effect of Brain Pathology on ASD

* It is widely accepted that Autism has a biological basis.
* Many anomalies exist in the Anatomy & physiology of Autistic brain.
* In addition, a variety of non-genetic pathological conditions especially those, that occur during parental development can produce symptoms of Autism.

Sub Types of ASD

Asperger Syndrome:

It is relatively less severe and newly diagnosis in the field of ASD, it was named in the honor of Hans Asperger, an Autism psychiatrist & pediatrician.

Rett’s Disorder:

It is genetic neurological syndrome seen in girls that accompanies an arrest of normal brain development that occur during infancy.

Childhood Disintegrative Disorder:

Children with Childhood Disintegrative Disorder show normal intellectual and social development and then, some times between the ages of 2 to 10 years, show a severe regression into Autism.

Treatment of ASD

* Applied behavior analysis.
* Cognitive behavior therapy.
* Social skills training.
* Sensory integration therapy.
* Speech therapy.

***Stat home, stay safe. Thank You!***