

Pediatric Autoimmune Neuropsychiatric Disorders Associated with *Streptococcus*

Joseph

Sacred Heart College of Nursing, United Kingdom

Neuropsychiatric conditions are mental disorders that are typically attributed to diseases that originate from the nervous system. Pediatric Autoimmune Neuropsychiatric Disorders generally associated with Streptococcal infection [1]. Strep throat is a normal part of childhood. Some kids get it again and again and a simple round of antibiotics usually clears it up. But for a small number of children, the infection triggers strange behavior changes known as PANDAS. The children usually have dramatic, including motor or vocal tics, overnight onset of symptoms like obsessions and compulsions.

The concept of PANDAS was derived from observations that some individuals with Sydenham chorea have associated anxiety, emotional lability, obsessive compulsive symptoms, tics or a combination [2]. In 1998 investigators at the National Institute of Mental Health report a series of 50 patients with similar features and proposed a distinct clinical entity.

Initially In 1998, Dr. Susan Swedo, paediatrics and neuropsychiatry researcher described about PANDAS [3]. In 2008, Lombroso and Scahill have given the diagnostic criteria for PANDAS. In 2012, National Institute of Mental Health has revised the criteria and guidelines for diagnosing the PANDAS and again it was updated in 2017 [4].

PANDAS is the sudden onset of symptoms like those of obsessive-compulsive disorder or Tourette's syndrome following the infection with streptococci bacteria [5], caused by an auto immune reaction that affects the basal ganglia of the brain.

True lifetime prevalence of PANDAS is not known. A conservative estimate is 1 in 200 children in the US alone [6].

- 3 years-11%
- 4-9 years-69%
- 10-13 years-19%
- Above 14 years-1%

***Address for Correspondence:** Joseph, M.Sc Psychology, Sacred Heart College of Nursing, United Kingdom, Email: Akila.v.kumaran@gmail.com; akilaanbu@rediffmail.com

Copyright: © 2021 Joseph. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Received 05 March 2021; **Accepted** 22 March 2021; **Published** 30 March 2021

Streptococcus pyogenes (stained red), a common Group A streptococcal bacterium.

PANDAS [7] is hypothesized to be an autoimmune condition in which the body's own antibodies to streptococci attack in the basal ganglion cells of the brain, by a concept known as molecular mimicry.

- Children from 3 years to 12 years who had a previous history of strep infection with last 4 to 6 weeks.
- Early spring and late fall season may be a suitable season for this illness.
- Children live in close quarters with large groups of people.

The molecular mimicry is a process in which antigen on the cell wall of the bacteria are similar in some way to the proteins of the heart valve, joints, or brain. Due to the antibodies set off an immune reaction which damage those tissues, patients with streptococci infection can get heart diseases, abnormal movements like motor tics, and or arthritis [8].

1. Psychological symptoms
 - Obsessive compulsive and repetitive behaviors
 - Separation anxiety, fear
 - Panic attack
 - Incessant screaming
 - Irritable mood
 - Mood instability
 - Regression
 - Hyperactivity or an inability to focus
 - Hallucinations may be visual or auditory type
 - Depression
 - Suicidal wishes
 - Memory impairments
2. Physical symptoms
 - Tics and unusual movements
 - Sensitivity to light, sound and touch
 - Deterioration of small motor skills. Ex: Poor hand writing

- Insomnia
 -
-