

# Patterns of Tissue Pathology in Neurological Diseases

Sekhar Nani

Department of Pharmacy, Siddhartha Institute of Pharmacy, Prakasam, India

## Corresponding Author\*

Sekhar Nani

Department of Pharmacy, Siddhartha Institute of Pharmacy, Prakasam, India.

Email: rschiyyadri123@gmail.com

**Copyright:** 2021 Sekhar Nani. 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** 10 April 2021; **Accepted** 13 May 2021; **Published** 20 May 2021

## Introduction

Neurological disorders are medically defined as disorders that affect the brain as well as the nerves found throughout the human body and the spinal cord. Structural, biochemical or electrical abnormalities in the brain, spinal cord or other nerves can result in a range of symptoms like paralysis, muscle weakness, poor coordination, loss of sensation, seizures, confusion, pain and altered levels of consciousness. These include Epilepsy; Neuromuscular disease, etc. There are many recognized neurological disorders, some relatively common, but many rare. Mental disorders, on the opposite hand, are "psychiatric illnesses" or diseases which appear primarily as abnormalities of thought, feeling or behavior, producing either distress or impairment of function. According to the U.S. National Library of drugs there are quite 600 neurologic diseases.

Neurological disabilities include a wide range of disorders, such as epilepsy, learning disabilities, neuromuscular disorders, autism, ADD, brain tumors, and cerebral palsy, just to name a few. Some neurological conditions are congenital, emerging before birth. Other conditions could also be caused by tumors, degeneration, trauma, infections or structural

defects. Regardless of the cause, all neurological disabilities result from damage to the nervous system. Depending on where the damage takes place, determines to what extent communication, vision, hearing, movement and cognition are impacted.

## Patterns of Tissue Pathology

Some neuropathological patterns noted in certain neurological disorders, namely Wallerian degeneration, cerebral ischemia, neurodegenerative diseases, viral meningoencephalitis and demyelinating diseases. Wallerian degeneration is the commonest tissue reaction that occurs when the continuity of nerve fibers is disrupted. Traumatic transection or crush may be a common explanation for Wallerian degeneration within the peripheral nerves. Cerebral ischemia may be a condition during which blood supply and oxygen deliveries to the brain are inadequate. The most severe sort of ischemic injury may be a cerebral infarction. Ischemia injury within the brain is typically divided into two groups, focal cerebral ischemia (FCI) and global cerebral ischemia (GCI). Severe ischemia may result in the development of brain infarction. Neurodegenerative diseases and associated inflammation are mentioned during this chapter which usually occurs in adults whose brain already shows some evidence of degenerative changes. Neurodegenerative diseases are diseases of neurons, primarily affecting certain systems of neurons, primarily affecting cerebral mantle present clinically as dementia like Alzheimer disease (AD). The diseases affecting basal ganglia and related systems manifest as involuntary movement disorders. Parkinson disease (PD) and Huntington disease (HD) belong to the present category. More disease-specific distribution of the pathologic process and cellular changes has been recognized in neurodegenerative diseases. The viral infection in the central nervous system (CNS) and demyelinating diseases are also discussed in this chapter. Progressive multifocal leukoencephalopathy (PML) has been well recognized together of the most typical neurological complication for the AIDS patients. Demyelinating diseases are a heterogeneous group of disorders during which formed myelin sheaths degenerate with relative preservation of axons. Acute disseminated post-infectious encephalomyelitis (ADEM) and acute hemorrhagic leukoencephalitis (AHL) are both autoimmune demyelinating disorders.