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Huntington's Disease: An Overview

The purpose of this poster is to present research relating to the incidence, prevalence, etiology, and characteristics of Huntington's disease, as well as provide information for speech-language pathologists on how to professionally assist individuals diagnosed with the disease.

Huntington's disease (HD) is a neurodegenerative disease that was clinically characterized by Irving W. Lyon in 1863 and additionally by George Huntington in 1972. It affects the central nervous system (CNS) and is characterized primarily by chorea, which is defined as involuntary, rapid, nonstereotypic, random, purposeless movements of a body part. Huntington's disease is an inherited condition caused by the repeated expansion of the cytosine-adenine-guanine (CAG) trinucleotide in the coding for the huntingtin gene (also referred to as the *IT15* gene and Htt gene). The length of the CAG repetitions indicates how early the onset of symptoms will occur. The expansion of CAG changes the regular functions of Htt, which results in abnormalities in neuronal cells. On the cellular level, there is severe depletion of neurons in the caudate nucleus and putamen and prevalent neuronal degeneration in the cortex.

Huntington's disease is primarily characterized by progressive motor, cognitive, and psychiatric symptoms. Motor symptoms can be divided into two classifications: added involuntary movements (i.e., chorea), and impaired voluntary movements, which result in limb incoordination and impaired hand movements. Distinctive non-motor indications of Huntington's disease are dementia, depression, personality changes, and attention deficits. Cognitive impairment includes delayed thought processing and deterioration of significant cognitive processes that regulate other components of cognitive function. Related to speech-language pathology, hyperkinetic dysarthria, dysphagia (swallowing disorder), and apraxia affect individuals with Huntington's disease.

The role of the speech-language pathologist in helping individuals with Huntington's disease is to address speech difficulties due to dysarthria, as well as treat dysphagia and reduce aspiration. Speech-language pathologists may also assist patients with Huntington's disease in circumventing communication difficulties due to language impairments that affect comprehension. In addition, the speech-language pathologist can assist the patient in reducing choking and swallowing difficulties and work closely with them in using augmentative and alternative communication (AAC) devices.