

Aphasia

Aphasia (derived from the Greek “aphatos” meaning speechless) Another name for aphasia is **aphemia**. is a neurological disorder caused by damage to the portions of the brain that determine **language skills**. Primary signs of the disorder include difficulty in expressing oneself when speaking, trouble understanding speech, and difficulty with reading and writing. Aphasia is not a disease, but a symptom of brain damage. Most commonly seen in adults who have suffered a stroke, aphasia can also result from a brain tumor, infection, head injury, or dementia that damages the brain. It is estimated that about 1 million people in the United States today suffer from aphasia. The type and severity of language dysfunction depends on the precise location and extent of the damaged brain tissue.

Types

Generally, aphasia is divided into four broad categories:

Expressive aphasia

This type of aphasia involves difficulty conveying thoughts through speech or writing. The affected person knows what he or she wants to say, but cannot find the words to do so.

Receptive aphasia

This type involves difficulty understanding spoken or written language. The affected person hears the voice or sees the print but cannot make sense of the words.

Anomic or amnesia aphasia

This type of aphasia is the least severe form of aphasia. Affected people have difficulty using the correct names for particular objects, people, places, or events.

Global aphasia

This type results from severe and extensive damage to the language areas of the brain. Affected people lose almost all language function, both comprehension and expression. They cannot speak or understand speech, nor can they read or write.

Signs and Symptoms

Primary signs of the disorder include the following:

- Difficulty in expressing oneself when speaking
- Trouble understanding speech
- Difficulty with reading and writing

Causes

Aphasia is a symptom of damage in the areas of the brain responsible for producing and understanding spoken or written language. It is most commonly seen in adults who have suffered a stroke. Aphasia can also result from a brain tumor, infection, head injury, or dementia that damages the brain.

Some forms of aphasia may have a genetic basis. Mutations in the progranulin gene have been associated with primary progressive aphasia in a study of two families with siblings affected by the disease.^[1] Progranulin is a growth factor, a protein that helps cells grow. Lack of functional progranulin, which can occur due to a gene mutation, may contribute to the progression of many neurodegenerative diseases, such as Alzheimer disease.

Diagnosis

Aphasia may sometimes be misdiagnosed as confusion because these conditions have similar symptoms. However, a medical history and a series of language and communication skills can be used to diagnose aphasia. A history of seizures, memory problems, difficulties in carrying out daily activities, and symptoms of aphasia are used for diagnosis. Often the presence of any of these signs will also provide insight into the cause of the aphasia. In addition, tests of spontaneous speech, reading, writing, comprehension, and naming are frequently performed. Four language tests are frequently used when a diagnosis cannot be made by the simple tests mentioned above:

- Boston Diagnostic Aphasia Examination
- Boston Naming Test
- Western Aphasia Battery

- Action Naming Test
- Token Test

Treatment

In some instances, an individual will completely recover from aphasia without treatment. In most cases, however, language therapy is needed. This is more effective if started early after development of aphasia. Rehabilitation with a speech pathologist involves extensive exercises in which patients read, write, follow directions, and repeat what they hear. Computer-aided therapy may supplement standard language therapy.

Expected Outcome

The outcome of aphasia is difficult to predict given the wide range of variability of the condition. Generally, people who are younger or have less extensive brain damage fare better. The location of the injury is also important and is another clue to prognosis. In general, patients tend to recover skills in language comprehension more completely than those skills involving expression.

Research

The National Institute of Neurological Disorders and Stroke (NINDS) and the National Institute on Deafness and Other Communication Disorders conduct and support a broad range of scientific investigations to increase our understanding of aphasia, find better treatments, and discover improved methods to restore lost function to people who have aphasia.

Epidemiology

Prevalence

It is estimated that about 1 million people in the United States today suffer from aphasia.

References

1. Mesulam M, Johnson N, Krefft TA, et al. Progranulin mutations in primary progressive aphasia: the PPA1 and PPA3 families. Arch Neurol. 2007 Jan;64(1):43-7

External Links

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