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Parkinson's Genetic Mental Retardation Syndrome

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Abstract

The neurological condition known as Parkinson's syndrome causes intellectual incapacity as well as a condition known as focal dystonia that mostly affects hand movement. Parkinson's syndrome typically affects men; when it affects women, the signs and symptoms are milder. Parkinson's syndrome is typically linked with mild to moderate intellectual impairment. Some of the affected people exhibit traits of autism spectrum disorders, which impair social interaction and communication. Parkinson's syndrome can potentially lead to recurrent seizures.

Keywords: Parkinson's syndrome • Autism spectrum disorders • Dystonia

Introduction

Parkinson's syndrome is not inherited; rather, a genetic alteration takes place at some stage of embryonic development. Some of these cells' genetic makeup will change as they divide and expand, while others won't. Parkinson's syndrome has relatively modest characteristics as a result of the mosaic nature of these genetic alterations. This disorder has an X-linked recessive inheritance pattern. One of the two sex chromosomes, the X chromosome, has the gene linked to this disease. One mutated copy of the gene in each cell is sufficient to induce the disease in males (who have only one X chromosome). A mutation would need to arise in both copies of the gene in females (who have two copies of the X chromosome) [1].

Description

Mild to severe intellectual disability and hand dystonia are the main features of the rare neurological disorder Parkinson's syndrome. In addition, dysarthria, aberrant conduct, repeated seizures, and/or an atypical gait may be present (style of walking). Parkinson's syndrome typically affects men; when it does affect women, the signs and symptoms are frequently milder. It has an X-linked recessive inheritance pattern and is brought on by changes (mutations) in the ARX gene. Each person's indications and symptoms will determine how they will be treated. The neurological condition known as Parkinson's syndrome causes intellectual incapacity as well as a condition known as focal dystonia that mostly affects hand movement. Parkinson's syndrome typically affects men; when it does affect women, the signs and symptoms are frequently milder. Parkinson's syndrome is typically linked with mild to moderate intellectual impairment. Some of the affected people exhibit traits of autism spectrum disorders that impair social interaction and communication. Epilepsy, or recurrent seizures, can also manifest in Parkinson's syndrome.

The neurological condition known as Parkinson's syndrome causes intellectual incapacity as well as a condition known as focal dystonia that mostly affects hand movement. Parkinson's syndrome typically affects men; when it does affect women, the signs and symptoms are frequently milder. Parkinson's syndrome is typically linked with mild to moderate intellectual impairment. Some of the affected people exhibit traits of autism spectrum disorders that impair social interaction and communication. Epilepsy, or recurrent seizures, can also manifest in Parkinson's syndrome. Parkinson's syndrome differs from other intellectual impairment syndromes by having focal dystonia of the hands. A category of movement issues known as dystonias include tremors, involuntary, continuous muscle contractions andother uncontrolled motions.

Parkinson's syndrome differs from other intellectual impairment syndromes by having focal dystonia of the hands. A category of movement issues known as dystonias include tremors, involuntary, continuous muscle contractions andother uncontrolled motions. A kind of dystonia referred to as "focal" affects only one area of the body, in this case the hands. The Parkinson's sign, or focal dystonia of the hands, first appears in early childhood and eventually gets worse as part of Parkinson's syndrome. Mild to severe intellectual disability and hand dystonia are the main features of the rare neurological disorder Parkinson's syndrome. In addition, dysarthria, aberrant conduct, repeated seizures, and/or an atypical gait may be present (style of walking). Parkinson's syndrome typically affects men; when it does affect women, the signs and symptoms are frequently milder. It has an X-linked recessive inheritance pattern and is brought on by changes (mutations) in the ARX gene. Each person's indications and symptoms will determine how they will be treated [2-4].

The ARX gene is the site of mutations that lead to Parkinson's syndrome. A protein that controls the activity of other genes can be made using the instructions provided by this gene. The ARX protein has a role in nerve cell migration and communication in the developing brain (neurons). This protein specifically controls genes involved in the migration of specialised neurons (interneurons) to the correct site. Signals are passed between neurons via interneurons. Alanine, a protein building block (amino acid), is repeated numerous times in four locations in the typical ARX protein. These alanine stretches are referred to as polyalanine tracts [5].

Conclusion

This disorder has an X-linked recessive inheritance pattern. One of the two sex chromosomes, the X chromosome, has the gene linked to this disease. One mutated copy of the gene in each cell is sufficient to induce the disease in males (who have only one X chromosome). A mutation would need to occur in both copies of the gene in females (who have two X chromosomes) for it to result in the condition. Males have X-linked recessive illnesses significantly more commonly than females since it is improbable that females will have two mutated copies of this gene. Females with one altered copy of the gene may have some signs and symptoms related to the condition.

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Conflict of Interest

There are no conflicts of interest by author.

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