Uncover The Mysteries Of Alpha Synuclein: Part 1 Transcript

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Alpha-Synuclein and Lewy Bodies

Alpha Synuclein is a protein that plays a role in the development of Parkinson's disease. In Parkinson's. Alpha Synuclein can misfolded in aggregate forming clumps called Lewy bodies.

These Lewy bodies are found in the brains of individuals with Parkinson's and are considered the hallmark pathological feature of the disease.

How Alpha-Synuclein Damages Neurons

Now, the exact mechanism by which Alpha Synuclein aggregation contributes to the development of Parkinson's is still not fully understood. However, it's believed that the accumulation of abnormal Alpha Synuclein may lead to several detrimental effects.

These effects include, number one, neuronal dysfunction dysfunction of the nerve cells themselves, the present of the presence of alpha, the presence of abnormal Alpha Synuclein aggregates.

Let's say it again the presence of abnormal alpha synuclein aggregates can impair the normal functioning of nerve cells. It interferes with the release and regulation of neuro transmitters, which are essential for proper communication between brain cells.

Spread and Neuroinflammation

Number two cell to cell spread in Parkinson's disease, the abnormal alpha synuclein aggregates can spread from one nerve cell or neuron to another, propagating the pathology throughout the brain.

This cell to cell transmission is thought to contribute to the progressive nature of the disease. Number three, neuro inflammation. The presence of abnormal Alpha Synuclein can trigger an inflammatory response in the brain leading to chronic neuroinflammation.

This inflammation further contributes to the degeneration of neurons and the progression of Parkinson's disease.

Genetic Links and Ongoing Research

Mutations or genetic variations in the alpha synuclein energy and called SNCA have been identified in rare familial cases of Parkinson's disease, indicating a direct link between alpha synuclein and the development of the disease.

However, these genetic mutations account for only a small percentage of all Parkinson's cases. The majority of Parkinson cases are considered sporadic, where the causes are likely multifactorial, involving a combination of genetic, environmental and other factors.

Researchers continue to study alpha synuclein and its role in Parkinson's disease to gain a better understanding of its contribution to why people get the condition.

I hope the hope is that this knowledge will lead to the development of new therapeutic approaches targeting alpha synuclein and its aggregates to slow down or halt the progression of Parkinson's disease.