MS vs ALS

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MS vs ALS: What's the Difference?

At first glance multiple sclerosis (MS) and amyotrophic lateral sclerosis (ALS) may look similar – they both affect the central nervous system and the muscles, and are both degenerative conditions. However, there are many differences as well, and these differences determine the prognosis and the treatment. Let’s review these two conditions in more details

ALS is a neurodegenerative disease, affecting the motor neurons (brain cells involved in the muscle function). As this condition progresses, these neurons are completely destroyed; the brain can no longer control the muscles, leading to paralysis and eventually death.

MS is a neurodegenerative condition as well. The protective sheet surrounding the nerve cells (the myelin sheet) is destroyed. As a result, the instructions from the brain to the muscles and the rest of the body are impaired, leading to movement difficulties. Unlike ALS, MS is not fatal and rarely leads to complete paralysis. Many MS sufferers will experience mild symptoms for a long time, and lead a normal life, although in some cases it can progress rapidly.

Similarities

In both cases, the nerves and muscles are affected – stiff and weak muscles, lack of coordination and troubles moving are seen in both MS and ALS, especially in the early stages. An MRI is a great imaging test that can help differentiate betweenn the two conditions.

Differences

In time, these two diseases progress differently – ALS patients will experience more physical difficulties and less or no cognitive impairments, whereas MS sufferers will experience physical symptoms as well as mental impairments like depressive mood and mood swings, inability to concentrate or multitask, and foggy memory.

MS is an autoimmune disease, and therefore develops when the immune system doesn’t recognize and attacks body’s cells as if they would be foreign or dangerous. In MS, the immune system will target (and attack) the myelin sheet surrounding the nerve cells.

On the other hand, ALS is not an autoimmune disease (the exact cause is not well understood, but scientists believe it is not an autoimmune disease). In ALS, the nerves are attacked first, and the loss of myelin occurs later on.

Prognosis is worse for patients with ALS; it is likely they will become unable to walk, stand or move without assistance, and the condition is fatal. The overall prognosis for MS is better, as many individuals will experience symptoms on and off (relapsing remitting MS), although progressive forms of MS are more severe and can

significantly affect the ability to move or live independently. However, MS is less often debilitating and rarely fatal.

Treatment is also different. Riluzole is the only drug approved by FDA for ALS and is helpful in some cases (helps slow the progression of the disease). For MS, a variety of drugs and therapies are used- Corticosteroids and plasma exchange **(**plasmapheresis) are used for acute attacks, where beta interferons, Glatiramer acetate, Dimethyl fumarate and other immunspuppresnt drugs are used to slow down the progression and prevent relapses.