A comprehensive review of amyotrophic lateral sclerosis pdf

URL of this page: Also called: ALS, Lou Gehrig's Disease Amyotrophic lateral sclerosis (ALS) is a nervous system disease that attacks nerve cells called neurons in your brain and spinal cord. These neurons send messages from your brain and spinal cord to your voluntary muscles - which you can control, such as in your arms and legs. At first, this causes mild muscle problems. Some people see problems running or running Problems writing problems Speak Eventually, you lose your power and can't move. When the muscles in your chest fail, you can't breathe. Breathing machines can help, but most people with ALS die from respiratory failure. The disease usually strikes between the ages of 40 and 60. More men than women get it. No one knows what causes ALS. It can run in families, but usually attacks randomly. There's no cure. Drugs can relieve symptoms and, sometimes, prolong survival. NIH: The National Institute of Neurological Disorders and Stroke Symptoms typically does not develop until after age 50, but they can start in younger people. People with ALS have a loss of muscle strength and coordination that eventually gets worse and makes it impossible for them to perform routine tasks such as climbing stairs, getting out of a chair, or swallowing. Weakness can first affect the arms or legs, or the ability to breathe or swallow. As the disease gets worse, more muscle groups develop problems. ALS does not affect the senses (vision, smell, taste, hearing, touch). Most people can think normally, although a small number have dementia, causing problems with memory. Muscle weakness begins in one part of the body, such as the arm or hand, and slowly gets worse until it leads to the following: Difficulty lifting, climbing stairs, and walkingDifficulty breathingDifficulty swallows - choking easily, drooling, or chokingHead drop due to weakness of the neck musclesSpeech problems, such as slow or abnormal speech patterns (slurring of words)Voice changes, hoarsenessOther Respiratory emergencies. In: Cameron P, Jelinek G, Kelly A-M, Brown A, Little M, eds. Adult Emergency Medicine textbook. 4th ed. Philadelphia, PA: Elsevier Churchill Livingstone; 2015:chap 6.Kurz MC, Neumar RW. Adult resuscitation. In: Walls RM, Hockberger RS, Gausche-Hill M, eds. Rosen's Emergency Medicine: Concepts and Clinical Practice. 9th ed. Philadelphia, PA: Elsevier; 2018:chap 8.Roosevelt GE. Child respiratory emergency: lung disease. In: Walls RM, Hockberger RS, Gausche-Hill M, eds. Rosen's Emergency Medicine: Concepts and Clinical Practice. 9th ed. 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In: Townsend CM Jr., Beauchamp RD, Evers BM, Mattox KL, eds. Sabiston Textbook of Surgery. 20th ed. PA: Elsevier; 2017:chap 54. Sklerosis lateral amyotrofik amyotrofik causes slow degeneration of nerve cells (called motor neurons) that control muscle movement. As a result, people with ALS gradually lose the ability to control their muscles. Fortunately, their capacity to think and remember things is usually unaffected. ALS is also known as Lou Gehrig's disease, after the famous U.S. baseball player who developed the disease. There are several diseases other than ALS that gradually destroy motor neurone (called motor neurone disease), although ALS is the most common motor neurone disease. Different diseases have different prognoses. Amyotrophic Lateral Sclerosis (ALS), commonly known as Lou Gehrig's disease, is a progressive neuromuscular disease. ALS is characterized by progressive degeneration of motor nerve cells in the brain (upper motor neurons) and spinal cord (lower motor neurons). When motor neurons can no longer send impulses to the muscles, the muscles begin to waste (atrophy), causing increased muscle weakness. ALS does not damage a person's intellectual reasoning, vision, hearing, or sense of adequacy, smell, and touch. In most cases, ALS does not affect a person's sexual, bowel, or bladder function. ALS is often referred to as a syndrome because the disease becomes apparent in a variety of patterns. ALS is rare and spontaneous. Currently, there is no cure for amyotrophic lateral sclerosis. ALS statistics Most people who develop ALS are between 40 and 70 years old, although the disease can occur at a younger age. It happens all over the world with no racial, ethnic or socioeconomic boundaries. It affects as many as 30,000 in the United States, with 5,000 new cases diagnosed each year. Estimates suggest that ALS is responsible for as many as five out of every 100,000 deaths in people aged 20 or over. ALS is most common among people over the age of 60.The incidence of ALS is five times higher than Huntington's disease and about the same as multiple sclerosis. Many ALS patients can live longer and be more productive because of current research on the causes, prevention, and cure of the disease. Improvements in medical management, including nutrition and breathing, regularly improve patient survival. Fifty percent of affected patients live at least three years or more after diagnosis; 20 percent live five years or more; and up to 10 percent will last more than ten years. The cause of ALSALS is a rather diverse and clearly mystical disease. In more than nine out of every 10 cases diagnosed, no clear cause of the disease was seen, i.e. patients had no clear genetic history, complete with affected family members. Also, there's nothing about the way living their lives gives scientists and doctors clues about what causes ALS. Nothing in a patient's diet, where they live, how they have lived or what they have done with their lives can easily explain why they have evolved final onset, a fully developed and progressive disease. However, in about 5 percent of cases, a clear genetic history exists. The disease is the dominant autosomal in these patients; that is, that nearly half of all family members show a clear history of ALS. Studies in the early 1990s on genetic forms of the disease, including work by one of our scientific advisers, Dr. Robert Brown, revealed that a single gene defect can account for a portion of this family case. Mutations in genes for the enzyme superoxide dismutase 1 (SOD1) or copper zinc superoxide dismutase have been found in about 15-20 percent of ALS kinship cases. Some mathematics quickly suggests, then, that about 1 to 2 percent of all ALS cases involve mutations of this particular gene. However, for most cases of ALS, we do not know what causes the disease. However, the researchers have not been idle, and some interesting theories exist on what can cause or contribute to the death of motor neurons in ALS. Central scientists are focusing on this pathogenic theory. What Are the Symptoms of ALS? The following are the most common symptoms of ALS. Each individual, however, may experience symptoms differently. Symptoms may include: twitching and muscle cramps, especially those in the hands and feet of motor control in the hands and the use of twitching arms and legs and fatigue and the fall of things that cannot be controlled periods of laughter or crying or thick speech and difficulty in projecting the soundseperai disease develops, symptoms may include: shortness of breathing breathing swallowingparalysis Symptoms als may resemble other conditions or medical problems. Consult a doctor for a diagnosis. How is ALS Diagnosed? In addition to a complete medical history and physical examination, diagnostic procedures for ALS may include: laboratory tests - including blood and urine studies and thyroid function testmuscle and/or spinal fluid analysis of nerve biopsicerebral (spinal taps) - procedures used to make evaluations or diagnoses by examining fluid pulled from the spine. X-raysmagnetic resonance imaging (MRI) - a way to root noninvasive soft tissue and it does not involve X-rays. The MRI produces a sharp two-dimensional view of the brain and spinal cord tests.electrodiagnostic (i.e., electromyography (EMG) and nerve conduction speed, or NCV) - studies that evaluate and diagnose muscle and motor neurone disorders. Electrodes are inserted into muscles, or placed on skin that rely too heavily on muscles or muscle groups, and electrical activity and muscle response are recorded. How Is ALS Medically Classified? Making a proper diagnosis in ALS is complicated because symptoms can vary in each patient. For greater accuracy doctors have classified every known form:CLASSIC ALS -- neurological diseases characterized by the deterioration of upper and lower motor neurons (nerve cells). This type of ALS affects more than two-thirds of those with the disease. Primary Lateral Sclerosis (PLS) - a progressive neurological disease in which upper motor neurons (nerve cells) deteriorate. If the lower motor neurone is not affected within two years, the disease usually remains a pure upper motor neurone disease. This is the rarest form of ALS. Progressive Bulbar Palsy (PBP) - a condition that begins with difficulty in speaking, chewing and swallowing due to a lower decrease in motor neurons (nerve cells). The disorder affects about 25% of those with ALS. Progressive Muscle Atrophy (PMA) - a progressive neurological disease in which lower motor neurons (nerve cells) deteriorate. If the upper motor neurons are not affected within two years, the disease usually remains a purely lower motor neurone disease. Family - a progressive neurological disease that affects more than one member of the same family. This type of ALS accounts for a very small number of people with ALS in the United States (between five and ten percent). percent).