



Neuropathy: Causation, Therapeutic Interventions and Associated Complications

Clare Chao^{*}

Department of Neurological Sciences, University of Alabama, Birmingham, USA

DESCRIPTION

Numerous medical illnesses, including diabetes, as well as medical procedures like chemotherapy can cause neuropathy, also known as nerve damage. In reality, neuropathy, which is sometimes referred to as peripheral neuropathy, is not a single medical disorder but rather a word used to represent a variety of medical conditions in which the peripheral nervous system has been damaged, as well as the signs and symptoms of those conditions. Despite the fact that the collection of ailments cannot be reversed, we can take precautions to help prevent neuropathy or to manage it through diet, lifestyle, and medication.

Neuropathy signs and symptoms

According to the Mayo Clinic and National Institute of Neurological Disorders and Stroke (NINDS), neuropathy symptoms might include the following, albeit they ultimately depend on the underlying reason and the individual [1].

Pain

- Tingling, prickling, or burning feeling
- Temporary or permanent numbness
- Increased sensitivity to touch

The two distinct elements of the nervous system must be understood in order to comprehend how neuropathy functions in the body. They are referred to as the peripheral nervous system, which carries messages from the central nervous system to the rest of the body, and the central nervous system, which includes the brain and spinal cord.

The peripheral nervous system is further divided into a voluntary (or somatic) nervous system that manages all of the bodily movements we are aware of and are able to control, such as moving our limbs, and an involuntary (or autonomic) nervous system that manages bodily functions we are unable to control, such as heartbeat, breathing, and digestion. Neuropathy can

entail either voluntary and involuntary peripheral nerve damage or disturbance [2].

Causes and neuropathy risk factors

Neuropathy may also result from nutrient shortages, whether they are brought on by dietary imbalance, drunkenness, or disease-related malabsorption.

Deficiency of vitamin B12 According to an article in the Annual Review of Nutrition, this affects 10 to 15% of persons over the age of 60 and has been connected to neuropathy. The Foundation for Peripheral Neuropathy (FPN) claims that a B12 shortage harms the myelin sheath, which envelops and shields nerves. Without this defense, the nerves won't operate normally. Fish, meat, poultry, eggs, dairy products, and dairy-based foods are all sources of vitamin B12. If a blood test results in a B12 deficiency, it's crucial to increase intake of B12; however, B12 injections or supplements are other options if doctor finds to be deficient. The Office of Dietary Supplements (ODS) of the National Institutes of Health (NIH) states that the Recommended Daily Amount (RDA) of the nutrient for most adults aged 14 and older is 24 micrograms, though pregnant or nursing women should receive 26 microgram or 28 microgram, respectively [3].

Various neuropathy types

The type of neuropathy is based on where the nerve damage develops. By way of example, the Foundation for Peripheral Neuropathy states:

Mononeuropathy The term "mononeuropathy" refers to neuropathy in which only one nerve is harmed.

Polyneuropathy the damage to the nerves is most frequently referred to by doctors as polyneuropathy because it typically affects numerous nerves. Autonomic, sensory, motor, or a combination of these nerves may be implicated, and this will affect the symptoms. Damage to the autonomic nervous system

Correspondence to: Clare Chao, Department of Neurological Sciences, University of Alabama, Birmingham, USA, E-mail: clare@gmail.com

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may have an impact on blood pressure or body functioning, or even cause symptoms in the gastrointestinal tract. Damage to the motor nerves can impair movement and reflexes, but damage to the sensory nerves can impact feelings and sense of balance [4].

Symmetric polyneuropathy of the limbs The American Diabetes Association states that this is a typical kind of polyneuropathy and that diabetics are most likely to develop it. The first nerve fibers to malfunction in this type of polyneuropathy are those that are located farthest from the central nervous system; as the condition worsens, symptoms like pain and numbness spread symmetrically from the feet up the legs. Eventually, the involvement may extend to the upper extremities [5].

CONCLUSION

Neuropathy diagnosed using electro diagnostic testing these include nerve conduction testing and electromyography, in which problems are detected by recording and analyzing the nerves' responses after stimulation. Examining with needles to obtain aural and visual data on the performance of the nerves supplying a particular muscle, tiny needles are placed into the muscle.

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