

Diabetic Neuropathies: Diagnosis and Management

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Neuropathies are one of the most common complications of diabetes with diverse manifestations. These include focal neuropathy (such as carpal tunnel syndrome), mononeuropathy multiplex (such as diabetic plexopathy, or diabetic amyotrophy), systemic polyneuropathy (such as sensory neuropathy or autonomic neuropathy, orthostatic hypotension, gastrointestinal motility disorders, impotence et al.). The diagnosis of these neuropathies depends on history taking and laboratory examinations. Most of the neuropathies can be defined by nerve conduction studies, which evaluate the physiological status of large-diameter nerves (large-fiber neuropathy), and differentiate the pathology of demyelination from axonal degeneration. In certain subtypes of diabetic neuropathies, particularly when small-diameter nerves are affected (small-fiber neuropathy), special examinations are required. Over the previous decade, skin biopsy with quantification of epidermal innervation has become a new approach to investigate diabetic small-fiber sensory neuropathy. Based on this technique, we have conducted a series of studies on diabetic patients, which provide new formation for patient education and self-care (*Brain*, 127: 1593-1605, 2004). The ultimate goals of these assessments are to offer guidelines for management of diabetic neuropathy. Glycemic control is the most important principle. In addition, new therapeutic alternatives are in clinical trials, which provides new hope for both patients and physicians.