

Lower Extremity Disease More Prevalent in Diabetic Population

Early diagnosis may prevent complications associated with the disease.

BY LAURA SUAREZ, MANAGING EDITOR

A report from the Centers for Disease Control and Prevention's (CDC) *Morbidity and Mortality Weekly Report* urged practitioners to keep informed about the prevalence of lower extremity disease (LED) in the hopes that early detection and treatment could ward off associated complications including peripheral neuropathy.¹ The report indicated that one-fifth of the US population have LED, many of whom do not experience symptoms.

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and neuropathy include hyperglycemia, hypertension, dyslipidemia and smoking.² When multifactorial intervention was compared with conventional CVD treat-

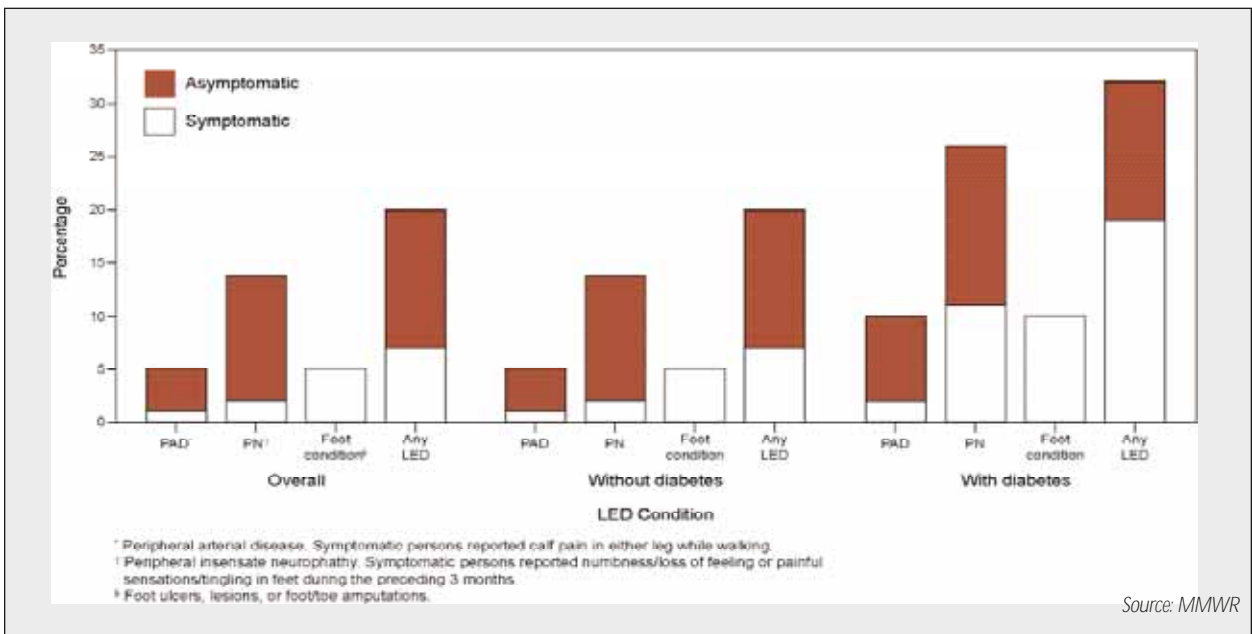


Figure 1. Prevalence of lower extremity disease among patients aged ≥40 years with and without diabetes.

TABLE 1. DEFINITION OF LOWER EXTREMITY DISEASE

- Peripheral arterial disease with an ankle-brachial blood pressure index of <0.9 in one of the two legs
- Peripheral neuropathy where ≥ 1 insensate area was found on either foot
- A self-reported history of foot ulcer/sore or sore on one leg where healing time was ≥ 4 weeks
- The presence of foot lesions
- Amputation of a foot or toe

ment in type 2 diabetes patients, researchers found that targeting multiple risk factors in an intervention reduced CVD and microvascular complication risk by half.³

PURSUE RISK FACTORS

“These [risk factors] should be pursued intensely in the presence of LED since multifactorial treatment significantly reduces neuropathy and [CVD],” Aaron I. Vinik, MD, PhD, director of the Strelitz Diabetes Research Institute, Eastern Virginia Medical School, Norfolk, Virginia, told *DIABETIC MICROVASCULAR COMPLICATIONS TODAY*.

According to research updating the National Health and Nutrition Examination Survey (NHANES), patients with diabetes are two times more likely than those without the condition to have LED and approximately 20% more likely to have symptoms.¹ Fifty-three percent of diabetes patients and 31% of nondiabetic patients were LED symptomatic. In the presence of peripheral neuropathy, 42% had symptoms of the complication compared with 21% of nondiabetic patients. The CDC conducted the research; data from 1999 to 2002 was analyzed to update the prevalence of LED in persons aged ≥ 40 years with and without diabetes.

LED-ASSOCIATED COMPLICATIONS

Patients enrolled in the NHANES study who were aged ≥ 40 years underwent interviews and examinations to determine the rate of LED among the population. Results demonstrated that 18.6% of the NHANES population aged ≥ 40 years had one or more complication associated with LED. More specifically, 5% of patients had peripheral arterial disease (PAD), 12.9% had peripheral insensate neuropathy and 4% had a foot ulcer, lesion or underwent amputation (Figure 1).

“The American Diabetes Association Omnibus survey indicated that up to 70% of patients with diabetes had symptoms compatible with neuropathy,” Dr. Vinik said. The survey included 82,119 patients with diabetes. “It is important to recognize this since now we have approved drugs for treatment.”

Noninvasive tests including ankle-brachial blood pressure measurements for PAD and monofilament testing for peripheral insensate neuropathy were performed. Although insensate is a difficult term to define, Dr. Vinik said that the loss of 10-g monofilament may predict a developing foot ulcer in patients. The loss of 1-g sensitivity is a means of neuropathy diagnosis.

CALF, LEG PAIN

Patients were also checked for foot abnormalities and lesions. Criteria for the definition of LED can be found in Table 1. Patients were considered to have symptomatic PAD if they observed calf or leg pain during walking. They were considered to have symptomatic peripheral neuropathy if feet were numb or produced painful sensations and tingling within the past 3 months. If these symptoms were not observed in the presence of either complication, they were considered to be asymptomatic. Two-thirds of patients with LED did not experience symptoms, as compared to one-half of the patients with both diabetes and LED.

Researchers concluded that LED disproportionately affects people with diabetes as well as the older population. They also noted that the disease was more notable in patients aged ≥ 75 years (40.8%) versus patients aged 60 to 74 years (26.2%) or 40 to 59 years (12.3%); men (23.1%) versus women (16.6%); and non-Hispanic blacks (27%) versus non-Hispanic whites (19.1%) or Mexican Americans.

“African-Americans get less neuropathy but higher rates of amputation – possibly related to microvascular disease – thus it is critical to search for [LED and neuropathy] in this population,” Dr. Vinik said. ■

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