Diabetic Foot Pathology and Lower Extremity Complications in the Treatment of Diabetes

Foot ulceration and/or limb amputation is well-known to be a serious risk for diabetic patients. There is a substantial body of knowledge on this topic in the literature of podiatric medicine. This may be found in scientific articles and texts on the etiology, diagnosis, and treatment of the "diabetic foot." In clinical practice, patient education, appropriate screening, and timely involvement of podiatric as well as other medical services can reduce incidence and severity of ulceration and other complications, including the need for amputation.

The central issue highlighted by the Holewski, et al. article on page 35 of this journal is the critical need for appropriate and early diabetic clinic involvement of podiatric services. The time for involvement starts with the initial patient presentation, not just when pathologies and complications develop.

The complexities of issues related to the treatment of the diabetic foot makes comprehensive clinical treatment a difficult goal to accomplish for several reasons. First, the true clinical picture is even more complex than the one presented by Holewski, et al. Other factors, not fully addressed in their article, include peripheral vascular disease, possible structural pathologies (especially with neuropathic changes), and the potential role of the metatarsal fat pad in relation to the development of plantar lesions. Second, comprehensive testing requires equipment available at all diabetic clinics (e.g., noninvasive vascular flow-monitoring instruments). Third, and most important, is the appropriate clinical linkage between the management of pedal pathology as it relates to systemic disease, in this case, diabetes. This requires further research. In addition, a more uniform approach (by clinics) to the diabetic patient upon initial presentation is recommended. This is especially true in relation to prevention of pedal pathology.

As just one example of how wide the gap is between clinical knowledge and clinical practice, it has been well-established in the scientific literature that the diabetic patient himself has an important role to play in the treatment of diabetes. Yet, Holewski and his colleagues report that 41 percent of the insensate patients were not aware of their sensory deficit." A comprehensive patient education program should be an integral part of the management of the diabetic patient.

Substantial evidence exists in the scientific literature suggesting that alcohol and cigarette use play a significant contributing role as an etiology of pedal pathology, thus their presence in a patient’s history has clinical importance. Research is needed to better confirm these findings and formally establish related clinical screening and other treatment practices accordingly. Obviously, prevention needs appropriate emphasis.

I recommend a program of research as well as a series of articles which define and test comprehensive screening and referral protocols that effectively incorporate and link podiatric knowledge and services to the prevention and treatment of the diabetic foot pathologies and complications. The article by Holewski, et al. points in this direction and more work is needed.

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