

CLINICAL SUMMARY

The Use of a Specialized Nutritional Supplement for Diabetic Foot Ulcers Reduces the Use of Antibiotics

Tatti P and Barber AE, *J Endocrinol Metab* 2012;2(1):26-31.

Diabetic foot ulcers are one of the costliest complications in persons with diabetes.

Diabetic foot ulcers are due to either a neuropathic origin or a vascular origin or both. Many times, these ulcers can lead to loss of the limb or even death of the patient. In a previous study, Tatti and Barber showed that the use of a specialized nutritional supplement containing arginine, glutamine, and beta-hydroxy-beta-methylbutyrate (HMB) was associated with a reduction in the healing time (247 vs 83 days) and improvement of lean body mass in patients with diabetic foot ulcers.¹ Based on these earlier results, the present study evaluated the cost-benefit ratio of using this supplement to improve the healing of diabetic foot ulcers.

This study identified 22 patients with type-2 diabetes who had previously been treated for neuropathic ulcers of the foot and subsequently developed recurrent foot ulcers with similar characteristics. All subjects were treated for the second recurrent foot ulcer in the same way as the initial ulcer treatment but received a supplement containing arginine, glutamine, and HMB twice a day as a part of their standard of care.

Results

During the initial foot ulcer treatment period, 83 courses of antibiotics were used. Results however, showed that when a specialized nutrition supplement of arginine, glutamine, and HMB was added to the standard of care for treatment of the subsequent ulcer, only 36 courses of antibiotics were used ($p=0.002$). Based on the direct and indirect cost of treatment at the time, it was concluded that the antibiotic treatment was reduced by 50%. The authors stated that “because the time to healing was shortened, both the direct costs (medication, surgery, nursing time, etc.) and the indirect costs (hospitalization, days of work lost) were decreased.”

NUTRITION CONCLUSION

The addition of a nutrition supplement with arginine, glutamine, and beta-hydroxy-beta-methylbutyrate was effective in reducing the cost of the antibiotic treatment by approximately 50% and the auxiliary economic and social burden of diabetic foot ulcers in this patient population. These results suggest that the addition of this supplement as an adjunct to standard of care, can be cost effective in the treatment of diabetic foot ulcers.

REFERENCE:

1. Tatti P, Barber A., Nutritional Supplement is Associated with a Reduction in Healing Time and Improvement of Fat Free Body Mass in Patients with Diabetic Foot Ulcers. *EWMA Journal* 2010;10(3):13-18.