Abstract

Int J Clin Pract. 2005 Jun;59(6):645-50.

Treatment for diabetic mononeuropathy with alpha-lipoic acid.

Tankova T, Cherninkova S, Koev D.

Clinic of Diabetology,Clinical Centre of Endocrinology, Clinic of Neurology, Medical University, Sofia, Bulgaria.

PATIENTS: Twenty-three diabetic patients -- 16 men and seven women (mean age: 50.7 +/- 17.4 years; mean duration of diabetes: 13.6 +/- 6.9 years) -- with diabetic mononeuropathy of the cranial nerves participated in the study. Four of them were with mononeuropathia multiplex and total ophthalmoplegia, affecting the oculomotor, trochlear and abducent nerves; 12 with paresis of the oculomotor nerve, one -- of the trochlear nerve and six -- of the abducent nerve.

TREATMENT: They were treated with alpha-lipoic acid (600 mg) for 10 days daily intravenously, thereafter one film tablet of 600 mg daily for 60 days.

RESULTS: On the 10th day, we found significant improvement in the clinical signs of diabetic mononeuropathy - double vision, motility and position of the eyeball, ptosis of the upper eyelid and mydriasis. The mean period of oral treatment was 69.1 +/- 23.8 days, following the 10-day intravenous application of alpha-lipoic acid, and full recovery of the diabetic mononeuropathy was achieved with this therapeutic approach. Peripheral neuropathy was present in 17 patients (74%). On the 10th day, we established a decrease in total symptom score by an average of 2.7 +/- 1.4 points and by the end of the treatment period it was improved by 5.9 +/- 1.9 points ($p = 0.04$). On the 10th day, we found a decrease of 33% in foot pain and by the end of the second month, it fell by 65.5% ($p < 0.0001$). Vibration perception threshold was reduced in these patients at entry -- mean: 2.42 +/- 1.8 at the great toe, 2.89 +/- 1.8 at the first metatarsal and 3.65 +/- 1.7 at the medial malleolus. By the end of the second month, it reached mean 4.7 +/- 1.8 ($p < 0.002$) at the great toe, 4.92 +/- 2.1 ($p = 0.004$) at the first metatarsal and 5.3 +/- 1.4 ($p < 0.01$) at the medial malleolus. Cardiovascular autonomic neuropathy was present in two of the patients and there was improvement after treatment in the Ewing's tests -- Valsalva manoeuvre, deep-breathing test and lying-to-standing test.

CONCLUSION: The results of our study demonstrate that alpha-lipoic acid appears to be an effective drug in the treatment for not only peripheral and autonomic diabetic neuropathy, but also diabetic mononeuropathy of the cranial nerves leading to full recovery of the patients.

PMID: 15924591