

A Trial of LDL-Apheresis Therapy in hemodialysis Patients with Uremic Neuropathy

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It has been established that clinical or subclinical neuropathy is a common complication in uremic patients. However, no effective therapy for the symptoms of uremic neuropathy such as severe neuralgia, orthostatic hypotension, restless leg syndrome, and burning feet syndrome has been established. In this study, we attempted LDL-apheresis for the treatment of uremic neuropathy, expecting the improvement of nerve function by increased blood flow of the microcirculation. Repeat LDL-aphereses were performed in three hemodialysis patients with uremic neuropathy who had normal cholesterol levels and no history of diabetes. And LDL-aphereses were carried out once a week for eight weeks. During LDL-apheresis treatment the clinical symptoms of all patients, especially numbness and restless leg syndrome, were improved. Comparing the pre and post treatment values, there was a 30% or greater decrease in total cholesterol, triglyceride, LDL-cholesterol, and Lp (a) in all patients. As to nerve function response, motor nerve conduction velocity (MCV) and sympathetic skin response were improved in all patients by LDL-apheresis therapy, but no improvement was found in sensory conduction velocity and coefficient of variation of R-R intervals.

We demonstrated that LDL-apheresis improved clinical symptoms and MCV in three hemodialysis patients with severe neuropathy. Although the mechanism of these clinical and nerve functional changes remains unclear, LDL-apheresis might be an effective therapy to uremic neuropathy.