

Investigating the effect of curcumin compared to conventional treatment on the severity of diabetic sensorimotor polyneuropathy in patients with type 2 diabetes

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Abstract

Background and Aim: Diabetic sensorimotor polyneuropathy is a common complication of diabetes, with no specific treatment to prevent it and existing pain relief options being unsatisfactory. Antioxidants or agents that destroy free radicals may help control diabetic neuropathy. Curcumin, found in turmeric, has therapeutic effects like anticancer, antioxidant, antimicrobial, and neuroprotective properties.

Methods: This is a clinical pilot study involving 20 patients with diabetic sensorimotor polyneuropathy due to type 2 diabetes. The patients are divided into two groups: a control group and a treatment group. Both groups receive routine treatment for their condition, which must be the same for all patients. Their diabetes and related issues, such as blood pressure and blood sugar, are monitored. Patients are randomly assigned to each group using a block random method, and matching is done on background variables. The patients are observed for two months. Initially, the severity of their condition is scored, and it is scored again at the end of the study. The control group receives an additional 80 mg curcumin capsule daily for two months. The study's outcome measures the effects of adding curcumin to their routine treatment.

Results : The Toronto clinical neuropathy score showed no significant difference between the two groups before and after the intervention ($P > 0.05$). The intervention group had a greater decrease in the score compared to the control group, but this was not statistically significant. However, there was a significant difference in scores before and after the intervention in both groups ($P < 0.05$), indicating that treatment was effective in reducing neuropathy, with the intervention group showing more improvement.

Conclusion This study examined how Curcumin capsules affect sensorimotor polyneuropathy severity from type 2 diabetes, comparing it to routine treatments. Results showed no significant difference, but Curcumin reduced severity more than the control group

Keywords: Diabetic sensorimotor polyneuropathy; Curcumin; Toronto clinical neuropathy score