

Role of N-Acetylcysteine in Patients with Diabetic Nephropathy

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Abstract

Introduction: Diabetes mellitus has been major problem in developed and developing countries. The progression of disorder cause prolonged exposure of vascular tissues to hyperglycaemia resulting in long-term microvascular/ macrovascular complications in the health; and nephropathy is one of them.

Methods: The present study was designed to evaluate the role of N-acetylcysteine on microalbuminuria and HbA1c level in patients with diabetic nephropathy. A randomized, open controlled clinical trial which includes 58 diabetic nephropathy patients (50 men and 8 women) aged between 35–60 years who had diabetes for at least more than 5 years. The patients divided in to two groups such as positive control and N-acetylcysteine group. Each group contains 29 patients for evaluation of the parameters for four months follow-up for both control as well as N-acetylcysteine group.

Results: After 4 months of supplementation of N-acetylcysteine, it was found that, there is a significant decrease in values of microalbuminuria and HbA1c (Glycosylated haemoglobin) when compare to the positive control group.

Conclusion: The result of study concludes that, the N-acetylcysteine significantly lowers microalbuminuria and HbA1c in patients with diabetic nephropathy. Therefore, supplementation of N-acetylcysteine may prevent the diabetic nephropathy.

Keywords: Microalbuminuria, HbA1c, N-acetylcysteine.