

# **Serum MiR-377 and MiR-29a in Type II Diabetic Patients with Diabetic Nephropathy**

## **Abstract**

**Aim:** The aim of our study is to evaluate the impact of serum miR-377 and miR-29a on the development and pathogenesis of diabetic nephropathy in type II diabetic patients.

**Place and Duration of Study:** The study was conducted in Faculty of Medicine, Fayoum University, Fayoum, Egypt, from July 2015 to December 2015.

**Methodology:** The present study was conducted on 110 subjects: 30 controls, 40 diabetic subjects with microalbuminuria and 40 diabetic subjects with macroalbuminuria. Blood and urine samples were taken from 110 subjects; Urine samples were collected for measurement of urine albumin. Serum was separated for detection of: Transforming growth factor beta 1 (TGF- $\beta$ 1) by Elisa and miR-377 and miR-29a by qRT-PCR.

**Results:** There is significant increase in the mean values of serum miR-377 [ $P < 0.001$  &  $P < 0.001$ ] and significant decrease in the mean values of serum miR-29a [ $P < 0.001$  &  $P < 0.001$ ] in diabetic subjects with macroalbuminuria compared with diabetic subjects with microalbuminuria and healthy control subjects.

**Conclusions:** Serum MiR-377 is significantly increased and serum MiR-29a is significantly decreased in patients with diabetic nephropathy. Accordingly, these miRNAs have a strong potential to act as biomarkers to diagnose, treat and prognose diabetic nephropathy.