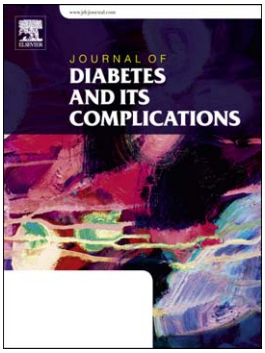

MiR-126 overexpression inhibits high glucose-induced migration and tube formation of rhesus macaque choroid-retinal endothelial cells by obstructing VEGFA and PIK3R2

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MiR-126 overexpression inhibits high glucose-induced migration and tube formation of rhesus macaque choroid-retinal endothelial cells by obstructing VEGFA and PIK3R2

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Abstract

Aim: The aims of this study are to investigate the relative regulation between miR-126 and VEGF/PI3K/AKT signaling pathway in retinal vascular endothelial cells.

Methods: Rhesus macaque choroid-retinal endothelial cell line (RF/6A) cells were cultured in high glucose to imitate the conditions occurring in DR. First, we detected the expression of miR-126, VEGFA and PIK3R2 in RF/6A cells on the condition of high glucose by q-PCR and western blot. Then, after addition of miR-126 mimics and miR-126 inhibitor, we investigated the function of miR-126 in RF/6A cells by scratch wound, transwell migration and tube formation assays, and the effect of miR-126 on the expression of VEGFA, PIK3R2 and AKT. Moreover, bioinformatics analysis and luciferase array were used to confirm the direct or specific regulation of miR-126 to VEGFA or PIK3R2.

Results: Here, first, we found that high glucose could induce the decrease of miR-126,