

عنوان مقاله:

Effects of IMOD™ on angiogenesis, miR-503 and CDC25 expression levels in heart tissue of diabetic male rats

محل انتشار:

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خلاصه مقاله:

Objective: Diabetes is associated with vascular complications and impaired angiogenesis. Since angiogenesis plays a crucial role in vascular homeostasis in ischemic heart diseases, in this study, the effect of IMOD™ on miR-503 and CDC25 expression level which are altered in impaired angiogenesis were investigated in heart tissue of diabetic rats. **Materials and Methods:** Forty male Wistar rats (200-250 g) were randomly classified into 4 groups: control (C), IMOD™ (I), diabetes (D), and diabetes+IMOD™ (D+I). For induction of experimental diabetes in animals, a single dose of streptozotocin (STZ; 60mg/kg) was injected intraperitoneally. After 8 weeks of treatment with IMOD™ (20 mg/kg/day), heart tissue samples were removed and used for measurement of miR-503 and CDC25 expression level as well as histological studies. **Results:** Results of this study showed that diabetes decreased heart tissue angiogenesis which was associated with increased miR-503 and reduced CDC25 expression levels ($p<0.05$) and IMOD™ could reduce the expression of miR-503 and increase the expression of CDC25 ($p<0.05$). Moreover, IMOD™ extensively induced angiogenesis in the heart tissue of diabetic group. However, IMOD™ had no significant effect on expressions of miR-503 and CDC25, or angiogenesis in healthy rats. **Conclusion:** This study showed that IMOD™ is able to increase angiogenesis in the heart tissue of diabetic rats. The angiogenic effect of IMOD™ is associated with .reduction of miR-503 expression and increased expression of CDC25

کلمات کلیدی:

Diabetes, Angiogenesis, miR-503, CDC25, IMOD

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