

عنوان مقاله:

The protective effects of Olive leaf extract on Type ۲ diabetes, the expression of liver superoxide dismutase and total antioxidant capacity of plasma in rats

محل انتشار:

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خلاصه مقاله:

Olive leaf has also medicinal benefits in type ۲ diabetes. The aim of this cross-sectional study was to evaluate the effects of olive leaf extract on prevention of type ۲ diabetes induced by Streptozotocin and nicotinamide, assessment of the expression of liver superoxide dismutase enzyme gene and total antioxidant capacity of plasma in rats. In this study ۲۸ healthy, mature, Sprague-Dawely male rats with the initial weight of ۲۵۰ ± ۵۰ g were divided into ۴ equal groups (group۱: Healthy control; group۲: Healthy Trial; group۳: Diabetic control; group۴: Diabetic Trial). Fasting blood glucose in all rats was measured every week with glucose oxidase method. At the end of our study, after sacrificing mice, all experiments were measured. Fasting blood glucose was not significant difference in the group ۴ (۴۳۹ ± ۴۷ mg/dl) and group ۳ (۴۴۵ ± ۳۳ mg/dl) but with group ۱ (۸۵ ± ۱۱ mg/dl) significant difference was observed. There was no significant difference between total antioxidant activity and nitric oxide metabolites in groups but expression of superoxide dismutase gene was significantly increased in group۲ and group۳ ($P < ۰.۰۵$). Histopathological results of liver in group ۴ showed macrophages accumulation and mild inflammation and apoptosis in comparison with other groups. The extract of olive leaf with a dosage of ۱۰۰ mg/kg did not reduce blood glucose in diabetic rats. Therefore, traditional methods used to treat diabetes type ۱ and ۲ do not only prevent but also diminish the ability to reduce blood sugar and can also cause damage to hepatocytes and other complications.

کلمات کلیدی:

Olive leaf extract, Protective effects, Type۲ diabetes, superoxide dismutase, total antioxidant capacity

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