عنوان مقاله:

Crocin increases mitochondrial biogenesis in the Striatum rats with cholestasis

محل انتشار:

اولین کنگره پزشکی شخصی (سال: 1395)

تعداد صفحات اصل مقاله: 1

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خلاصه مقاله:

Introduction : Oxidative Stress and particularly the increased mitochondrial reactive oxygen species (ROS) production that occurs in cholestasis and links oxidative stress to the development of neurological diseases. Cholestasis effects on striatum and striatum is center of movement learning in the mind. The mitochondrial numbers and the expression of Proliferator-activated receptor Gamma Coactivator-1α (PGC-1α) and Mitochondrial Transcription Factor A (Tfam) are decrease during cholestasis. PGC-1α is the master regulator of mitochondrial biogenesis and function. Tfam is essential for human mtDNA transcription. It is also a key regulator of mtDNA copy number. Attenuation Of PGC-1α expression levels results in increased mitochondrial biogenesis including increased mitochondrial mass, protein import complexes, mitochondrial respiratory and fatty acid oxidation. The objective of this study was to investigate the protective effect of crocin against defects in striatum due to cholestasis in male Wistar rat. Materials and methods : Adult Male wistar rats weighing 200- 250g were randomly divided into five groups (eight rats in each group) which include: Group 1: Normal-control (non operation) . Group 2: Sham-control(underwent laparotomy without bile duct ligation). Group 3: BDL- control (underwent laparotomy with bile duct ligation) and all of three groups weren't received drug. Group 4:Sham- crocin and Group 5:BDL- crocin were treated with Crocin. Rats were injected with a daily dose of crocin (30 mg/kg IP) for 30 days. Striatum homogenates were obtained For Real Time PCR examination. Results: The results showed that the mean change in PGC-1α and Tfam expression of BDL- crocin group. There is a significant difference ($p<0.05$) as compared with BDL- control. Interventions were Improved mitochondrial biogenesis in the Striatum of Cholestatic male wistar rats.Conclusion:The present findings provide evidence that crocin by blockade of ROS generation and biogenesis improved may have beneficial effects in the mitochondrial dysfunction. .Therefore it can be a therapeutic strategy of neurodegenerative diseases such as Alzheimer and Parkinson

کلمات کلیدی:

crocin,striatum,cholestasis,PGC-1α, mitochondrial biogenesis,Tfam