

عنوان مقاله:

Neuroprotective effects of rosemary extract on white matter of prefrontal cortex in old rats

محل انتشار:

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خلاصه مقاله:

Objective(s): During aging, cerebral structures undergo changes due to oxidative stress. The consumption of some plants seems to improve neurological health. For example, rosemary extract (RE) which is widely used as a flavoring food has anti-inflammatory and anti-oxidant activities. Therefore, we aimed to study the effect of RE on the changes related to the aging process in the prefrontal cortex (PFC). **Materials and Methods:** Twenty-four male Wistar rats including young and old were purchased. Each group was divided into two subgroups: vehicle and rosemary (old vehicle (OV), old rosemary (OR), young vehicle (YV), and young rosemary (YR) groups). Then, we examined the number of intact neurons, myelin base protein (MBP), white matter (WM), levels of malondialdehyde (MDA), and glutathione peroxidase (GPx) in the PFC. **Results:** The results showed that in the old vehicle rats compared to the young group without treatment, except for the MDA level (which increased), other variables significantly decreased ($P \leq 0.05$). Additionally, RE consumption demonstrated a significant elevation of WMA, MBP intensity, number of intact neurons, and GPx activity level, while MDA levels significantly reduced in the treated old rats compared to the old vehicle group ($P \leq 0.05$). However, there was no significant difference between the OR and YV groups ($P \geq 0.05$). **Conclusion:** Overall, it seems that RE can protect and improve aging damages in the PFC due to its anti-oxidant properties. So, the use of RE can be a suitable strategy to prevent aging complications in the brain.

کلمات کلیدی:

Anti-oxidant, Neuroprotective, Prefrontal cortex, rosemary extract, White Matter

لینک ثابت مقاله در پایگاه سیویلیکا:

