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MEETING ABSTRACT Open Access

Evaluating the effect of aquatic extraction of Cannabis sativa seed on spatial memory consolidation

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Background

The existence of an endocannabinoid system in the central nervous system that consists of G protein-coupled CB1 cannabinoid receptor and endocannabinoids, including arachidonylethanolamide and anandamideand 2-rachidonoylglycerol, has gained general acceptance. Recent reports suggest that this system may serve several physiological functions thus, this research has tried to examine the research is the role of Tetrahyrocannabinol on learning process and spatial memory consolidation.

Materials and methods

40 male wistar rats (3-4 month, 320-260 g) were completely divided into 4 experimental groups and control group. Cannabis sativa seed was extracted with Soxhlet apparatus. To test spatial memory, Morris water mazemaze (7 days,4 trails) was used experimental groups with 50 $mg.kg^{-1}$, 100 $mg.kg^{-1}$, 150 $mg.kg^{-1}$, 210 $mg.kg^{-1}$ were injected in the peritoneal (IP) respectively and after one hour of injection spatial memory was done.

Results

The results show that experimental groups (50 $mg.kg^{-1}$, 100 $mg.kg^{-1}$, 150 $mg.kg^{-1}$ doses), for learning time have significant level deduction in the comparison of controlgroup ($p < 0.05$), but experimental group with 210 $mg.kg^{-1}$ dose has not significant level in the comparison of control group ($p < 0.05$).

Conclusions

The research findings show that, Cannabinoid components Injected dose dependent, can be effective on memory and learning processes in Morris water maze test.

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