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The preventive effect of date palm (*Phoenix dactylifera*) seed and fruit hydroalcoholic extracts on carrageenan-induced inflammation in male rat's hind paw

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Background & Objective: The side effects of NSAIDS drugs have caused increasing interest of scientists in herbal medicines as alternative treatment. In this study, the anti-inflammatory effect of seed and fruit of date palm hydroalcoholic extracts, due to having antioxidants, was studied.

Materials & Methods: In this study, the extracts of date palm seed and fruit were prepared by maceration method in 70% alcohol. Eighty male rats Wistar, divided into 10 groups of 8 in each, 4 groups received different doses (100, 200, 400 and 600 mg/kg) of seed extract and 4 other groups different doses (100, 200, 400 and 600 mg/kg) of fruits extract of the palm, and the positive control aspirin (300 mg/kg) and the negative control group saline (5 ml/kg) via injection intraperitoneally. Half an hour later all animals received 100 µl of 1% carrageenan into the rats' hind paw subcutaneous. The changes in rats paw edema was measured by plethysmometer every hour for 5 hours.

Results: The effect of all of the doses of date palm seed extract on edema were less than aspirin ($P < 0.05$). But there was no significant difference between the group that received 400 and 600 mg/kg date palm fruit extract when compared with aspirin group. The dose 400 mg/kg of fruit extract showed the most anti-inflammatory effect and it was assigned as the best dose.

Conclusion: It is likely that with further studies on different model of animals and also on human model the palm fruit extract could be used for pain treatment.

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