Anti-inflammatory activity of date palm seed by downregulating interleukin-1 beta, TGF-beta, cyclooxygenase-1 and-2: A study among middle age women

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Abstract	The prevalence of degenerative diseases increases with age. Furthermore, various factors tend to trigger cells injury, thereby, causing inflammation. This study, therefore, aims to examine the anti-inflammatory mechanisms of steeping date seeds in middle age women. This is a quasi-experimental design with a pre-and post-test approach used to evaluate the anti-inflammatory effect of 2.5 g of steeped of date palm seed, consumed by 30 healthy middle-aged women per day (in 250 mL water) for 14 days. The final num-bers (22 subjects) of recruited women were included in the statistical analysis. Their level of IL-1 beta, TGF-beta, IL-6, TNF-alpha, IL-12, COX-1, COX-2, and PGE2 were determined using ELISA. The results showed that the expression of IL-1 beta, TGF-beta, COX-1, and COX-2 in women significantly decreased after consuming date palm seed. Steeped of date seed acts as an anti-inflammatory by downregulating the expression of key proinflammatory mediators. (C) 2020 The Author(s). Published by Elsevier B.V. on behalf of King Saud University. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).
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