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Randomized, double-blind, placebo-controlled clinical trial studying the effects of alpha-lipoic acid at combination with mefenamic acid in patients with primary dysmenorrhea

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 $\mathbf{P}$  rimary dysmenorrhea (PDM) is a common gynecologic disorder and is one of the main causes for referral to the gynecology clinic. This study aimed to determine the effects of alpha-lipoic acid(ALA) and Mefenamic acid and a combination compared with placebo on the PDM.

This study was conducted as a single-blind, placebo-controlled clinical trial on population consisted of female students living in dormitories of Qazvin University of Medical Sciences who had moderate to severe dysmenorrhea using the Visual Analogue Scale (VAS) questionnaire. Participants were randomly divided into 4 groups: ALA capsules, Mefenamic acid capsules, ALA+ Mefenamic acid capsules and placebo groups. The first group received a 600 mg capsule of ALA daily for 5 days (2 days before menstruation and 3 days after the onset of the course). The second group received a 250 mg capsule of Mefenamic acid daily for 5 days, similar to the previous group. The third group received a single ALA capsule (600 mg) + one capsule of Mefenamic acid (250 mg) daily for 5 days. The placebo group also received capsules similar to ALA.

Our final results suggested that, although Mefenamic acid significantly decreased the menstrual pain, ALA supplementation, 600 mg, would be more efficient than Mefenamic acid in 250 mg. Also, the combination of ALA and Mefenamic acid significantly has been far

Considering the effect of alpha-lipoic acid supplementation on pain relief in patients with primary dysmenorrhea, this antioxidant can be recommended for the healing of symptoms of these patients. Keywords: Primary dysmenorrhea, alpha-lipoic acid, Mefenamic acid, menstrual pain