



Evaluation of topical effect of poppy seed oil on anesthesia parameters of New Zealand white rabbit

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Abstract:

Background and Purpose: Use of anesthetics is one of the main elements of surgery by eliminating the feeling of pain and reaction to painful factors. Due to lower toxicity compared with chemical drugs, herbal medicines can be used to reduce undesirable side effects of these drugs. Persian medicine literature has mentioned use of poppy seed oil to relieve headaches and insomnia in humans. The aim of this study was to investigate the topical effect of poppy seed oil on anesthesia parameters such as analgesic, hypnotic and muscle relaxant properties in New Zealand white rabbits.

Materials and Methods: Twenty-five New Zealand white rabbits were evaluated in 5 groups of 5 (one control group and four experimental groups). The control group was anesthetized only by intramuscular injection of Ketamine and Xylazine. Experimental group 1 received 3 drops of poppy seed oil in one ear one hour before anesthesia, experimental group 2 received 10 drops of oil on the inner skin of long cartilage of one ear two hours before anesthesia, experimental group 3 received 3 drops of oil in both ears one hour before anesthesia, and group 4 received 10 drops of oil on the inner skin of the long cartilage of both ears two hours before anesthesia.

Results: In analysis of variance (ANOVA), the anesthesia duration in experimental groups 1, 3 and 4 was significantly equal. In experimental groups 1 and 3, the mean analgesia duration and deep anesthesia duration were significantly increased compared with the control group. In none of the groups were changes in vital signs worrying, and all were within the approved range during rabbit anesthesia.

Conclusion: Topical application of poppy seed oil in New Zealand white rabbits lead to hypnosis, analgesia and deep anesthesia with muscle relaxant property and had anesthetic and hypnotic effects.

Keywords: Anesthesia, Ketamine, Xylazine, Rabbit, Poppy Seed Oil

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