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Clinical and histopathological evaluation of phenytoin sodium in treatment of experimental wounds in dog

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Phenytoin sodium (as topical) is generally used for the treatment and healing of wounds in human. In this study, we evaluated the clinical and histopathological effects of phenytoin sodium in management of experimental wounds in dog. It was performed on 20 mix breeding dogs. Weights of dogs were almost 25kg. surgical preparation and anesthesia carried out and then surgical wounds were performed by a similar pattern (rectangle shape — 25 x 50 mm²) in the thoracolumbar region. Wounds were divided in two groups: treatment group in the left side and control group in the right side. Postoperative treatment in the phenytoin group was included daily wound irrigation with normal saline and then topical application of phenytoin sodium. But in control group it was included only irrigation with normal saline. Clinical and histopathological evaluations were performed in each group at 7, 14, 21 and 28 days after operation. According to results of this study, wound closure was accelerated in the experiment group in compare to control at days 14, 21 and 28 after honey application. Color and consistency of granulation tissue and epithelization were also more improved in experiment group from day 14. From histopathological aspect, in treatment group, the dense connective tissue was developing from the base of the wound and no pus were observed after 3 weeks. In addition, less neutrophilic chemotaxis in treatment group were found rather than control group. So phenytoin sodium can be used as a topical substance to accelerate the healing process of the skin wounds.

Keywords: Phenytoin sodium, Healing of wounds, Clinical and histopathological evaluation, dog

Effect of formaldehyde on fertility in the mouse

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Harmful effects of formaldehyde injection, such as testicular tissue, are quite well documented. However, detailed studies of the effects of formaldehyde on fertility are quite limited. For this study a total number of 60 mice (15 male and 45 female) were used. Five groups of male mice (n=6) were subjected to intra peritoneal treatment of formaldehyde daily at doses of 0, 2.5, 5, 7.5 and 10 mg/kg body weight in a period of 40 days. From each group 3 male mice were chosen for fertility rate. The results showed that the formaldehyde could exert a significant effect on fertility; in all treated groups, Results from this study suggest that the formaldehyde might increase infertility in men.

Keywords: formaldehyde, fertility, mice