HISTORY OF CALCIUM CHLORIDE INJECTABLE STERILIZATION IN MALE DOGS AND FIRST REPORT OF USE IN CATS

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Calcium chloride solution has an extensive publication history as an injectable sterilant in dogs and other large mammals. Here we present first published use in cats. In dogs, publications go back to 1978 (e.g. Krogga LM) and more recent studies by our team have provided quantitative data on efficacy, testosterone reduction, and measures of stress taxa such as plasma corticosterone concentrations of control (Jana and Samanta 2007). With feral cat populations a continuing problem, we sought to explore its use in cats. Six cats per group were injected with 5%, 10%, or 20% calcium chloride ophthalmic solution in saline solution with or without hydrocortisone (1 mg/ml) as an anti-inflammatory agent and testosterone levels were determined before and 15 days after injection. All cats tolerated injection, and all were marked with a distinct color at the injection site. Testes were removed after 15 days. We also offer a potential mechanism (androgen-mediated apoptosis) for this result, and hypothesize that the effects may be mediated by apoptosis of the testicular Leydig cells. While this is an interesting development, and值得关注 further study, we believe that the use of calcium chloride in cats should be approached with caution due to potential side effects and the need for further research on its long-term effects on both animals and humans.