

Intrarenal Injection of Pentobarbital Sodium for Euthanasia in Cats: 131 Cases, 2010-2011

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Abstract : The objective of this retrospective study was to determine whether intrarenal injection of pentobarbital sodium is a practicable method of euthanasia in client-owned cats. 131 Cats were anesthetized using a combination of tiletamine, zolazepam, and acepromazine given by of subcutaneous or intramuscular injection. Once an appropriate plane of anesthesia was reached, 6 ml of pentobarbital sodium was injected into either the left or right kidney. The patient's age, sex, estimated weight, presenting condition, estimated dehydration level, palpable characteristics of the kidney pre and post injection, physical response of the cat, and time to cardiopulmonary arrest were recorded. Analysis of 131 records revealed that cats receiving an intrarenal injection of pentobarbital sodium had an average time to cardiopulmonary arrest of 1 minute. The great majority (79%) experienced cardiopulmonary arrest in less than one minute with the remainder experiencing cardiopulmonary arrest between 1 and 8 minutes of the injection. 95% of cats had no observable reaction to intrarenal injection other than cardiopulmonary arrest. In the 19% of cases where kidney swelling was not palpable upon injection, average time to cardiopulmonary arrest increased from 0.9 to 1.6 min. **Conclusions and Clinical Relevance:** Intrarenal injections of pentobarbital sodium are similar in effect to intravenous methods of euthanasia. Veterinarians who elect to use intrarenal injections can expect cardiopulmonary arrest to occur quickly in the majority of patients with few agonal reactions. Intrarenal injection of pentobarbital sodium in anesthetized cats has ideally suited for cases of owner observed euthanasia when obtaining intravenous access would difficult or disruptive.

Keywords : euthanasia, injection, intrarenal, pentobarbital sodium

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