

# capsules

## THE CURRENT LITERATURE IN BRIEF

### Glaucoma: Hold the Ketamine & Diazepam!

For certain ocular diseases, it is vital to maintain intraocular pressure (IOP) within a normal or low-normal range during sedation or general anesthesia. Some drugs, including those used for sedation and anesthesia, can change IOP by increasing extraocular muscle tone or by changing the production rate or outflow of aqueous humor. Studies have shown that ketamine can increase IOP in animals. This study evaluated the effects of ketamine, diazepam, and their combination on IOP in clinically normal dogs that were not premedicated. Fifty dogs were randomly assigned to 1 of 5 treatment groups: ketamine alone (5 mg/kg [KET5] or 10 mg/kg [KET10], IV), ketamine (10 mg/kg) with diazepam (0.5 mg/kg; [KETVAL], IV), diazepam alone (0.5 mg/kg [VAL], IV), or saline (0.9% NaCl) solution (0.1 ml/kg [SAL], IV). IOP measurements were taken with an applanation tonometer immediately before and after injection and at 5, 10, 15, and 20 minutes after injection. IOP was found to be increased over baseline values immediately after injection in the KET5 and KETVAL group and at 5 and 10 minutes in the KET5 group. The KET10 group had a nonsignificant increase in IOP compared with baseline and saline control values, a result that could not be definitively explained. There was no change in IOP in the VAL group. It was concluded that ketamine should not be used as part of an anesthetic protocol for dogs with corneal trauma or glaucoma or in those undergoing intraocular surgery.

**COMMENTARY:** This straightforward study illustrates the well-recognized importance of tailoring anesthetic protocols to the individual patient. As practitioners, we don't always consider the effects of various induction agents on IOP, but it is clear that we should carefully reconsider our use of ketamine and diazepam in patients with ocular disorders.

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Effects of ketamine, diazepam, and their combination on intraocular pressures in clinically normal dogs. Hofmeister EH, Mosunic CB, Torres BT, et al. *AM J VET RES* 67:1136-1139, 2006.