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Pearls for the Practitioner

Topic: Notes from the 40th Annual Conference of the American College of Veterinary Ophthalmologists

The Animal Medical Center has created this e-mail publication to keep you informed about the latest practices in veterinary medicine and how these practices are being applied at The AMC. If you are interested in obtaining past issues of "Pearls for the Practitioner," please visit <http://www.amcny.org/vetpearls>.

- The two most commonly used instruments to measure intraocular pressure in veterinary medicine are the Tonopen® and the Tonovet®. Users should be aware of variables influencing the accuracy of the instruments. One variable influencing the accuracy of results obtained from the Tonopen® and the Tonovet® is corneal thickness. Increased thickness of the cornea, such as in corneal edema, results in an elevation of intraocular pressure values. The IOP readings of the Tonovet® are affected more by the increased corneal thickness than IOP readings obtained using the Tonopen®. The Tonopen® is the preferred instrument to measure IOP if there is an abnormal cornea.
- Proper restraint is important when obtaining an intraocular pressure in dogs and cats. Pressure on the jugular veins, or on the eyelids can result in an increase of intraocular pressure which is not due to a disease state. The effect of various methods of eyelid manipulation and compression of one or both jugular veins on intraocular pressure was studied in normal dogs. The greatest increase in intraocular pressure was associated with lateral eyelid extension and the combination of lateral eyelid extension and compression of both jugular veins. Restraint of patients undergoing intraocular pressure measurement should avoid putting pressure on the jugular veins. Minimal eyelid manipulation is important when measuring the intraocular pressure.
- Timolol maleate is a common medication used to treat glaucoma in dogs and cats. It is also a component of Cosopt® (dorzolamide/timolol). In a study evaluating the effect on intraocular pressure and heart rate in dogs, it was found to have little effect on intraocular pressure in normal dogs, but did cause a significant miosis and decrease in heart rate in normal dogs. AMC does use timolol maleate, but avoids using it in asthmatic cats and dogs and cats with heart disease.

- A retrospective study evaluating hyphema in dogs and cats revealed that the most common concurrent diagnoses were retinal detachment, uveitis and cataracts. The prognosis for maintaining vision in eyes with hyphema is poor. An ocular ultrasound is a helpful diagnostic tool to determine the underlying etiology of hyphema in dogs. The Ophthalmology Service at the Animal Medical Center has an ultrasound unit dedicated to the diagnosis of ocular diseases. The ultrasound machine has a 35 MHz probe to provide detailed examination of the anterior segment of the eye.
- For dogs with corneal pain due to experimental corneal ulceration, tramadol at 4 mg/kg PO q 8 hours was found to be an effective treatment to reduce pain associated with the ulceration.

The Ophthalmology Service of The Animal Medical Center has been treating companion animals with ocular disease and disorders and consulting with area veterinarians for over 30 years. The department is devoted to the understanding and care of eye disease in pets, and dedicated to offering our professional colleagues the most advanced diagnostic and treatment options. We always welcome the opportunity to assist you and your clients in finding solutions to ocular problems. Please feel free to contact us if you would like to consult with a specialist.

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