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Oculocardiac Reflex Caused by Retrobulbar Block in an Old Dog with Scoliosis

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Signalment: Enucleation of a 9-year-old, spayed female pekingese's left eye was scheduled because of recurrent eyeball rupture caused by chronic corneal ulcer and descemetocele. Nonambulatory tetraparesis was observed in physical examination and scoliosis of the thoracic vertebra in thoracic radiography. Complete blood count, electrolytes, serum chemistry profiles were within normal ranges except of alkaline phosphatase, which was slowly improved compare with four months ago.

Results: Severe respiratory sinus arrhythmia was observed before induction of anesthesia, but disappeared after induction. Retrobulbar block was performed with 2% lidocaine, 0.5% bupivacaine, 0.1% epinephrine combination (1:5:0.2) before start of surgery. After retrobulbar block, heart rate decreased from 110 to 76 beat/min and sinus arrhythmia was recurred. Because it was considered as oculocardiac reflex caused by increase of intraorbital pressure from retrobulbar block, atropine (0.025 ㎎/㎏, IV) was administered and intermittent positive pressure ventilation was started. Also, because ventricular tachycardia appeared, lidocaine (2 ㎎/㎏, IV) was administered. Then, heart rate was maintained around 130 beat/min, and surgery was finished without the other problems.

Clinical relevance: Although retrobulbar block is performed to provide analgesia and to prevent oculocardiac reflex in ophthalmic surgery, occasionally it induces oculocardiac reflex by infiltrated volume and/or retrobular hemorrhage. In this case, oculocardiac reflex could be treated with atropine and intermittent positive pressure ventilation.

Key word: oculocardiac reflex, ventricular tachycardia, retrobulbar block, scoliosis, dog.

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