Anaesthesia in patient with epilepsy

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KAREN WALSH advises on the precautions needed when using anaesthesia in patients with idiopathic epilepsy

OTTO, a four-year-old male, neutered, German shorthaired pointer, has been booked in by a colleague for you to remove a lump on his lip identified by fine needle aspiration as a histiocytoma.

You are a confident surgeon and look forward to making a neat job of the operation on this handsome patient. You happily advise the nurse to give the patient your routine premedication for minor procedures of 0.02mg/kg acepromazine (ACP) and 0.02mg/kg buprenorphine.

Question

Just as the nurse calls to tell you she has given the premedication, you remember your colleague told you not to forget Otto is epileptic. With growing discomfort, you vaguely recall something about not giving ACP to patients that have idiopathic epilepsy. Do you need to panic?

Answer

No, you can breathe freely and continue your operation as planned. Although it previously had been believed ACP decreases the seizure threshold and should be avoided in epileptic dogs, this is no longer the case.
Original reports of phenothiazines reducing the seizure threshold were based on the use of higher doses than most clinicians would use today (the latter being in the range of 0.01mg/kg to 0.05mg/kg).

A very relevant clinical paper looking at the effect ACP has on the incidence of seizures was published in 2006 by Tobias et al, who found the seizure incidence did not increase when ACP was used as a premedication in doses ranging as indicated previously. In fact, in several of the cases it was found ACP decreased the likelihood of seizures during the six hours following administration.

However, even if using ACP in appropriate doses as part of your premedication in epileptic dogs is safe, you still should not forget your patient has a significant pre-existing condition that might affect and complicate your anaesthetic. It is useful, therefore, when considering the protocol for anaesthesia of patients with idiopathic epilepsy, to consider the following points.

• What is the normal cycle of seizures for this patient? For elective procedures, anaesthesia should be postponed until the patient is stable and not experiencing clusters or high frequency of seizures.

• What treatment is the patient receiving? It is important to maintain phenobarbital levels, so you should advise the client to give the usual phenobarbital dose in the morning with a small amount of food. It is also important the patient receives any medication that is due in the evening, so this should be reiterated to the client at the time of discharge.

• Are there any triggers the owner can identify that lead to seizure activity? Some patients are triggered by stressful situations, so these patients will often benefit from early premedication and a return home as soon as it is felt safe to do so.

• Have a seizure plan ready and place an intravenous cannula as soon as possible. Drugs such as benzodiazepine and injectable phenobarbital should be available if you are undertaking anaesthesia of these patients.

In most cases, you will have little influence over whether a patient seizures while in the clinic, but the important thing is to be prepared and to use drugs you are familiar with, so the likelihood of problems is minimised.

**Take home message**

Preparation is the key to managing anaesthetics in patients with idiopathic epilepsy: warning the client a seizure may occur despite your best efforts, placing an intravenous cannula as soon as possible and having the appropriate antiseizure medication in stock are all important measures.

**References**