

“How to Treat the Emergency Seizing Patient under Covid-19 Restrictions”

Dr Simona T Radaelli, DVM, PhD, DipECVN, MRCVS

European Specialist in Veterinary Neurology

RCVS Specialist in Veterinary Neurology

These guidelines are intended to help with management of an emergency seizing patient during the COVID-19 lockdown.

Status epilepticus and *cluster seizures* represent emergency conditions that require immediate treatment. Continuous seizure activity for longer than 30 minutes might cause severe systemic and brain damage.

New onset seizures, for more than 2 minutes, or more than one seizure in 6 hours when not already on anti-epilepsy drugs would be considered as urgent (RED) under the current COVID-19 guidelines.

Status epilepticus is defined as:

- a continuous seizure lasting at least 3-5 minutes, or
- two or more consecutive seizures, between which the patient does not regain consciousness.

It has been reported that over 30% of patients with status epilepticus suffer from idiopathic epilepsy.

Cluster seizures are defined as:

- two or more discrete seizures in 24 hours.

More than 3 seizures are considered an emergency, as they may lead to status epilepticus. In one study, 41% of epileptic dogs suffered from cluster seizures.

Advising owners as to when to use rectal diazepam

- Rectal diazepam should always be available to the owner of an epileptic animal for emergency treatment at home.
- Rectal diazepam should be administered after the second seizure in 24 hours.
- Application should be carefully discussed to avoid injury to the patient during an episode.
- The aim is to stop seizure activity in prolonged episodes or, in cases where clusters are the recognised pattern, to try to reduce the number of seizures.
- The recommended dose is 1 to 2mg/Kg to a maximum of three applications within 24 hours.

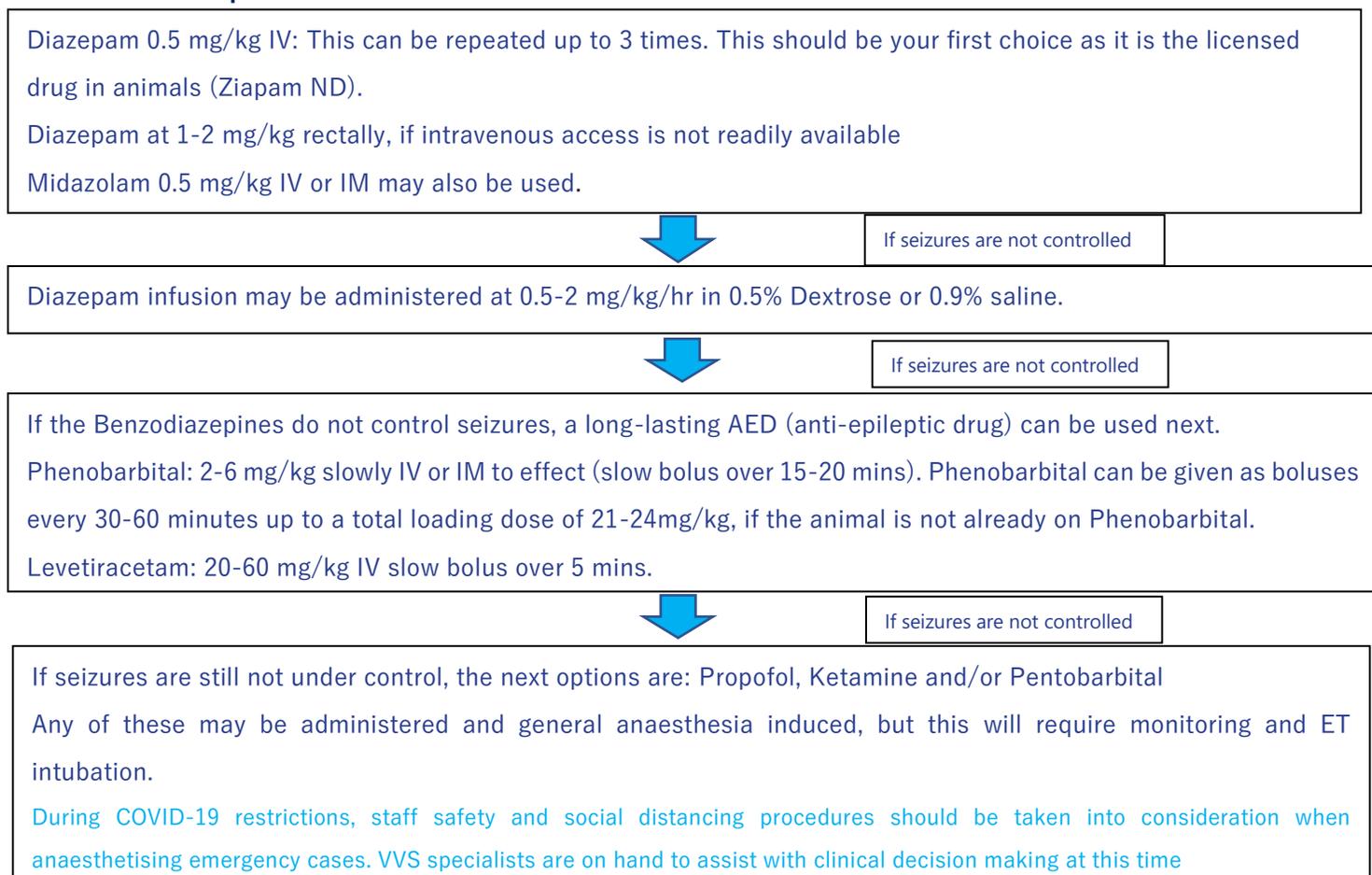
How to Treat the Emergency Seizing Patient under Covid-19 Restrictions

- Rectal absorption (10 minutes) is faster than oral or intramuscular injection.
- If rectal diazepam treatment is successful, then this case might not constitute an emergency, but a follow up phone call with the client would be appropriate to reassure them and discuss their concerns.

A full history should be collected as soon as possible to investigate current treatments, comorbidities, exposure to toxins, trauma, diet and seizures frequency. However, if the patient is seizing, then the priority is to control this.

Treatment of the seizing patient

- **IV access.**
 - The placement of an intravenous catheter is recommended as soon as possible.
 - If possible, blood should be collected (see notes below re. blood sampling and tests to consider).
- **Medical options** are summarised in the flow chart below:



How to Treat the Emergency Seizing Patient under Covid-19 Restrictions

Blood sampling and testing the seizing patient

Bloods should be collected as soon as possible for:

- Electrolyte analysis (to treat with the appropriate fluid therapy).
- Glucose serum levels (if hypoglycaemic, administer 50% dextrose diluted to 25% (500 mg/kg IV) over 15 minutes or oral glucose syrup).
- Ammonia and dynamic bile acid assessment.
- Kidney function (urinalysis should be included).
- If the animal is already on Phenobarbital treatment, blood levels should be tested.

- **Once seizures are controlled:**
 - **Supportive care and diagnostic evaluation** should follow the AED treatment.
 - Oxygen therapy should be supplied if the SpO₂ <95.
 - IV cannula (if not already placed).
 - Full blood analysis.
 - Blood pressure monitoring.
 - Body temperature monitoring.
 - The patient will need nursing care while hospitalised, including turning every 4 hours, bladder management, lubrication of the eyes, feeding when possible. Staff safety and compliance with Government COVID-19 guidelines will need to be adhered to.
 - Intravenous fluid therapy requirements will vary between patients. VVS Internal Medicine Specialists are happy to assist with this.
 - **Maintenance treatment**
 - Phenobarbital should be the first choice maintenance medication at 3mg/kg BID orally, when possible, or IM (unless contraindicated).
 - If the animal already has high blood levels of Phenobarbital, Levetiracetam or Potassium Bromide can be started at loading dose.

How to Treat the Emergency Seizuring Patient under Covid-19 Restrictions

- **Further investigations:**
 - Once the patient is stable, neurological examination and further diagnostic tests (MRI, CSF tap) are recommended, especially in cases that haven't been investigated previously.
 - Vets will need to refer to current BVA/RCVS guidelines to decide whether further diagnostics are immediately warranted in a stabilised patient or whether these could wait due to COVID-19 restrictions. VVS Neurologists are happy to assist with decision making.

Specific notes re COVID-19:

- This information sheet was published on 15/04/20. BVA and RCVS guidelines may be subject to regular change over the coming months. Please check for updates at:
BVA: <https://www.bva.co.uk/>
RCVS: <https://www.rcvs.org.uk/home/>
- Seizuring patients may require intensive nursing care and this often requires more than one staff member to be working in close proximity.
- Ensure that social distancing guidelines are maintained and/or that appropriate Personal Protective Equipment (PPE) is supplied to staff, to minimise transmission of COVID-19.
- If staffing levels or staff safety cannot be maintained to enable appropriate levels of care for the patient, then it may be necessary to consider alternative options.
- Animal welfare should be a priority, but so should human safety in these challenging and unprecedented times. Look after yourself and your team, as well as your patient.

If you would like to speak to a VVS Specialist about any of your cases, please do not hesitate to contact us:

T: 020 7043 2283

E: admin@vvs.vet

VVS Specialists are here to help and can review clinical history and test results and advise you on your cases as and when you need support.

You may be working sole charge, but you are not alone.