Sedating Patients for Cardiology Studies

Ideally, reasonable attempts should be made to acquire an electrocardiogram (ECG), radiographs, or an echocardiogram without sedation, particularly if the patient's heart rate is slow. If sedation is necessary, however, the following sedatives are appropriate for diagnostic studies.

Sedation for dogs

- **Trazodone** (5–15 mg/kg, orally) may be given both the night before **and** 1 hour before travel or arrival at the clinic.

  A reasonable starting dose based on weight is 7 mg/kg for dogs ≤11 kg and 5 mg/kg for dogs >11 kg. Consider reducing the dose to 3–5 mg/kg for larger dogs (>25 kg). Trazodone may also be given to dogs while at the clinic. It takes approximately 1 hour to take effect in a fasted dog.

  Note: Trazodone has no analgesic properties. Paradoxical excitation is uncommon; nevertheless a trial dose at home is recommended.
- If trazodone alone does not provide enough sedation, give **butorphanol** at 0.2 mg–0.3 mg/kg intravenous (IV) in addition to the trazodone. Pretreatment with trazodone usually renders butorphanol more effective.
- If the above is still not sufficient for adequate imaging, you may consider using careful titration of **alfaxalone*** at 1 mg/kg IV increments.

Sedation for cats

- **Gabapentin** given at home 2–3 hours before the visit at 50 mg–100 mg/cat orally.
- If Gabapentin does not provide sufficient sedation, administer:

  Butorphanol (0.2 mg–0.4 mg/kg, intramuscular [IM] or IV)

  or

  Butorphanol (0.2 mg–0.4 mg/kg, IM or IV) plus **alfaxalone*** (1 mg–2 mg/kg, IM or IV)

  or

  Butorphanol (0.2 mg/kg) plus **midazolam** (0.2 mg/kg) plus **alfaxalone*** (1 mg–2 mg/kg) given as an IM or IV combination
- **Alphaxalone*** may also be further titrated to effect at 1 mg/kg increments when used in any of the aforementioned protocols.

***Note:** Alfaxalone is an anesthetic agent and therefore supplemental oxygen, endotracheal tubes, and a resuscitator bag should be readily available.

Note: Sedation with alpha-2 agonists is not recommended in patients suspected or confirmed for structural heart disease or arrhythmias. These sedatives have a high chance of limiting the diagnostic validity of the study itself and may precipitate hemodynamic instability in affected patients. Profound bradyarrhythmias often occur, limiting the information we obtain from the ECG and prompting us to recommend a repeat ECG with no or different sedation. Sedation with alpha-2 agonists has also been proven to cause false-positive diagnoses of valvular regurgitation, cardiomegaly, and systolic dysfunction and can therefore also limit the diagnostic utility of thoracic radiographs and echocardiography, prompting us to recommend repeating the imaging with no or different sedation.