Troubleshooting bradycardia

FELINE BRADYCARDIA
HR <100 bpm in a cat with normal intracranial pressure

Did the cat receive an alpha₂-agonist?

No

Small P waves, enhanced T waves – hyperkalemia
Insulin/dextrose/calcium

Abnormal

Sinus arrest, 2nd degree AV block, synchronous AV dissociation

Third degree AV block – treat as if AV dissociation if not sure

Consider aborting procedure. Dopamine or epinephrine (adrenaline) to increase HR if that is not possible

Check cardiac rhythm ECG

Normal

Check anesthetic depth

Too deep

Decrease anesthetic depth

HR increased to >100 bpm

Yes

Atropine 0.01–0.02 mg/kg IV or glycopyrrolate 0.005–0.01 mg/kg IV

HR increased to >100 bpm

No

Is the animal severely hypothermic (<34°C [<93.2°F])

Yes

Improve active warming

Yes

MAP >60 mmHg
SAP >90 mmHg

Administer atipamezole IM

No = hypotensive

Yes

A tropine 0.01–0.02 mg/kg IV or glycopyrrolate 0.005–0.01 mg/kg IV

Insulin/dextrose/calcium

Too deep

Light to moderate plane

Decrease anesthetic depth

HR increased to >100 bpm

Yes

This algorithm is from the AAFP Feline Anesthesia Guidelines, published in JFMS in July 2018 and available at catvets.com/guidelines

Key
AV = atrioventricular; ECG = electrocardiography; HR = heart rate; IM = intramuscular; IV = intravenous; MAP = mean arterial pressure; SAP = systolic arterial pressure