

Anesthesia Monitoring

Intervene with specific critical values AND with any trending towards abnormal

BLOOD PRESSURE

Monitor continuously:
Blood pressure
Peripheral pulse, MM/CRT

HYPOTENSION

SAP <90
OR
MAP <60 mm Hg

1. Assess anesthetic depth

If too deep:

- Decrease inhalant
- Increase O₂ flow to 50 mL/kg/min (rebreathing)
 - 200 - 300 mL/kg/min (NBR)

2. Assess HR

Give anticholinergic if:

Med - lg canine <60 bpm
Small canine <80 bpm
Feline <90 bpm

3. Assess volume status

If hypovolemic:

Administer IV fluid bolus
Canines 10 mL/kg
Felines 5 mL/kg

4. Assess volume status

If still hypovolemic:

Administer colloid solution
Canines 5 mL/kg
Felines 2.5 mL/kg (max 20 - 40 mL/kg)

If normovolemic:

Administer ephedrine

5. Assess for hemorrhage

Transfuse if indicated:

Administer dopamine + dobutamine
(See text for dosing details and instructions)

END TIDAL CO₂

Monitor continuously:
EtCO₂

HYPERCARBIA

EtCO₂ >55 mm Hg

Assess anesthetic depth

If too deep:

- Decrease inhalant

Ventilate patient

OXYGENATION

Monitor continuously:
SpO₂
Respirations

HYPOXEMIA

SpO₂ <95%

Assess probe placement

- Use wet gauze with lingual probe

During induction:

- Preoxygenate and monitor
- Intubate quickly
- Provide 100% O₂
- IPPV at 2 - 4 bpm

If SpO₂ worsens, abort procedure and recover patient

During maintenance:

See text for causes and treatment

During recovery:

Provide O₂ support

If intubated:

50 - 100 mL/kg/min via breathing circuit
150 - 300 mL/kg/min via NRB circuit

If extubated:

Flow-by/mask/nasopharyngeal
- See text for details on partial reversal and brachycephalic recovery

TEMPERATURE

Monitor continuously:
Rectal or esophageal temperature

HYPOTHERMIA

T <100 °F

Mild 98 - 99° F
Moderate 96 - 98° F
Severe 92 - 96° F
Critical less than 92° F

Prior to induction:

- Place patient on warm surface
- Abort procedure if T worsens before induction

During maintenance:

1. Utilize pet warming device

- Circulating warm water or forced air patient warming blankets

2. Warm IV fluids

- Place IV fluid warmer as close to patient as possible

3. Warm saline lavage in open body cavity

- Measure fluid T (104 - 109° F)

4. Assess response

5. Abort procedure and recover patient

HEART RATE

Monitor continuously:
Heart rate,
Peripheral pulse

TACHYCARDIA

Large canines >100 bpm
Medium canines... >120 bpm
Small canines >120 bpm
Felines >160 bpm

1. Confirm manual HR and ECG match

2. Assess anesthetic depth

If too light:

- Increase inhalant (and O₂ flow rate)

3. Administer additional analgesics

4. Assess for hemorrhage

Transfuse if indicated

BRADYCARDIA

Large canines <60 bpm
Medium canines.. <60 - 80 bpm
Small canines <80 bpm
Felines <90 bpm

NO dexmedetomidine given:

1. Confirm manual HR and ECG match

2. Assess anesthetic depth

If too deep:

- Decrease inhalant

3. Assess BP (see hypotension)

Administer anticholinergic if indicated:

- Bradycardia
- Heart block
- HYPotension

4. Assess for hemorrhage

Transfuse if indicated

YES dexmedetomidine given:

1. Confirm manual HR and ECG match

2. Assess BP

Consider anticholinergic if:

- Bradycardia
- HYPotensive (MAP <60 mm Hg)
- See text for details

3. Consider dexmedetomidine reversal if:

- Emergency situation
- HR <30 bpm
- Procedure can be aborted

ECG

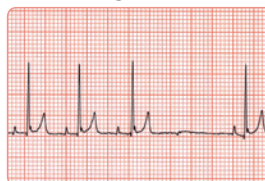
Monitor continuously

Common Deviations from Normal Sinus Rhythm

VPC



Second Degree Heart Block



Check for underlying causes and address:

Causes: Pain, hypercarbia (EtCO₂ >60 - 70), severe hypoxemia, cardiac disease, ischemia, drugs, etc.

Treatment criteria (see text for details):

- HR >150 - 180 bpm
- Pulse deficits
- Hypotension
- Abnormal VPC configurations
- 3 VPCs in a row, etc.

Consider lidocaine bolus, followed by CRI if indicated