Beyond Butorphanol: Pain Management for Elective Procedures in Young, Healthy Pets

October 11, 2006
Erica A. Feiste
NCSU College of Veterinary Medicine
Class of 2007
Disclaimer:

- I don’t hate butorphanol!
- I just don’t think of it as an analgesic drug.
- Butorphanol, in combination with an alpha 2 or acepromazine, provides nice sedation for nonpainful procedures such as ultrasound.
Patient

- 6 month old female yellow labrador
- Presents to you for OHE
- What’s your plan?
One way...

- Premed with butorphanol or BAG given subcutaneously
- Mask induction with iso or sevo
- Big dog – large incision
- No medication to go home
What’s wrong with this picture?

- Butorphanol’s analgesia lasts about 38 minutes in the dog while its sedation lasts longer. (Houghton et al 1991) This means the analgesia might be gone before you even start surgery.
- Premixed medications give you no dosing flexibility. You can’t adjust for patient demeanor.
- Catecholamine release from mask induction leads to increased stress response. Inhalant agents are hypotensive. Staff occupational exposure is a concern.
What’s wrong with this picture?

- Incisions heal side to side but hurt end to end. Start small and extend if necessary.
Remember that patient?

- Your patient recovers from anesthesia screaming and you have to carry her to the back of your hospital so that the other patients and their owners don’t become alarmed.
Patient Follow Up

- You see this dog six months later for her annual wellness visit. Her owner has to drag her into your exam room, and she looks like this.
Myths debunked

• “They don’t feel pain the way we do!”
  Doctors used to think that about human infants, too, performing open heart surgery with a paralytic agent and gas. Now they, and we, know better. (Anand 1987)

• “If you alleviate their pain, they move around too much and damage the surgery site!” Most analgesics blunt aching, throbbing pain without interfering with immediate sharp pain. Treating post-operative pain allows the animal to be comfortable but it will still know that stimulation of the injured area hurts. (Pascoe 2006)
How else can we do it?

- Premed with opioid/alpha 2 or opioid/acepromazine combination
- IV catheter +/- MLK CRI
- IV induction
- Small incision and gentle tissue handling
- Local block
- Post-op: repeat opioid or NSAID injection
- NSAID to go home +/- tramadol
Why is this better?

- Morphine and hydromorphone provide longer lasting, more significant analgesia than butorphanol.
- IV catheter and fluids provide blood pressure support.
- IV induction is MAC sparing compared to mask induction and helps maintain blood pressure.
- Small incisions hurt less.
- Blocking with bupivacaine as you close the linea provides local pain control. Can also perform testicular blocks.
- Post-op pain control keeps her comfortable and helps her heal faster. NSAID pre or post-op?
Patient Follow Up

- This patient recovers from anesthesia, is extubated, and goes back to sleep because she is comfortable.
Patient Follow Up

- This dog also returns to your practice in 6 months for a wellness exam.
- She walks in wagging her tail, loves you and your staff, and is a pleasure to work with.
What about the vomiting?

- “My techs don’t like to clean it up.”
- Did the owner really fast the animal?
- If it really bothers you, you can give ace 15 minutes before the opioid. Reduces vomiting to 18% of dogs from 55%. (Valverde 2004)
What about cats?

- DKT, “Kitty Magic” + buprenorphine
- IV induction if needed - propofol precautions
- Local blocks - dilute for volume
- Post-op: one dose of meloxicam
- To go home: buprenorphine TM
Thanks

- Dr. Bob Stein
- Dr. Cliff Swanson, DACVA
- Dr. Brenda Stevens
- Dr. Kelli Ferris
- Boehringer-Ingelheim Vetmedica
- Sandra Siegel
References

- VIN Anesthesia/Analgesia message board
- Vasg.org