Animal Dental Care
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# SMALL ANIMAL DENTISTRY: FIFTY KEY QUESTIONS

## Module 5
## Local Anesthesia and Pain Management

### 26. Why should local anesthesia be used for veterinary dental patients and when should this be placed?

- local anesthesia is indicated for all painful procedures involving oral structures including soft tissue, bone, and teeth
- this will provide intraoperative analgesia and the patient can usually be maintained on a lighter surgical plane of general anesthesia
- this will also provide profound postoperative analgesia at the procedure site or sites, and will prevent “winding up” of the pain pathways in the CNS to help reduce the requirement for postoperative analgesics
- after a patient is placed under general anesthesia, local anesthesia is placed prior to any painful oral or dental procedure

### 27. What are the current local anesthetic agents of choice for dogs and cats?

- one of the currently recommended local anesthetic agents is bupivacaine available in a 0.5 percent concentration with epinephrine
- the other agent of choice is articaine available in a 4.0 percent concentration with epinephrine

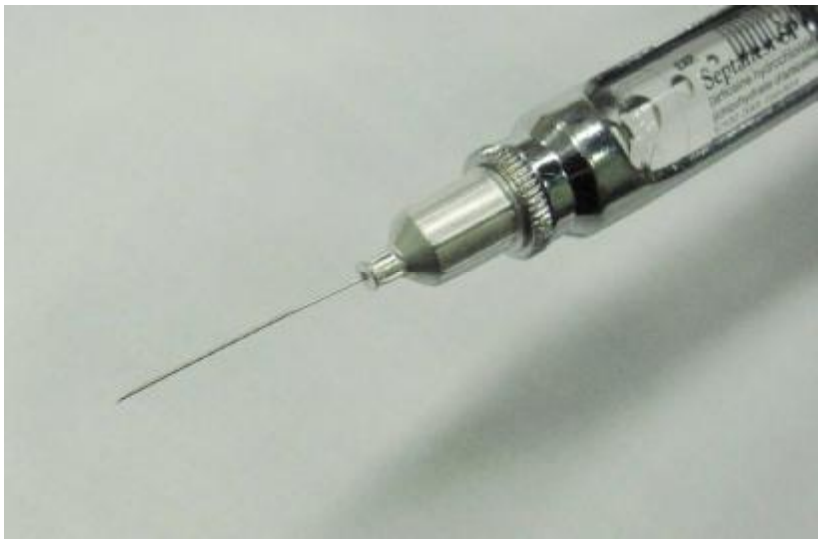

A preloaded Septanest SP™ carpule containing 1.7 ml of 4.0 percent articaine with epinephrine.

This is diluted by withdrawing 1.0 ml of the local anesthetic and replacing it with 0.9 ml of sterile saline.

A Septanest SP™ carpule is loaded into an aspirating syringe with a 30 gauge 1 inch needle for administration. Note the thumb ring permits both aspiration and injection.


A preloaded Vivacaine™ carpule containing 1.8 ml of 0.5 percent bupivacaine with epinephrine.

A 30 gauge needle is recommended as it will cause less potential neurologic trauma than larger gauge needles.



## 28. What are the recommended doses for the local anesthetic agents and what are their durations of action?

- the recommended maximum dose of bupivacaine for dogs and cats is 2 mg/kg, and for articaine is 7 mg/kg for all blocks placed under one general anesthetic episode
- the epinephrine in articaine and bupivacaine increases the duration of the analgesia by causing local vasoconstriction

- the bupivacaine carpule holds 1.8 ml of agent but has no volume gradations
- if the patient is over 2 kg body weight, the volumes administered can be estimated quite accurately unlike for smaller patients 2 kg or less

- another disadvantage of bupivacaine with epinephrine is its delayed onset of action
- clinically, this has been found to range from 5 minutes to times in excess of 10 minutes