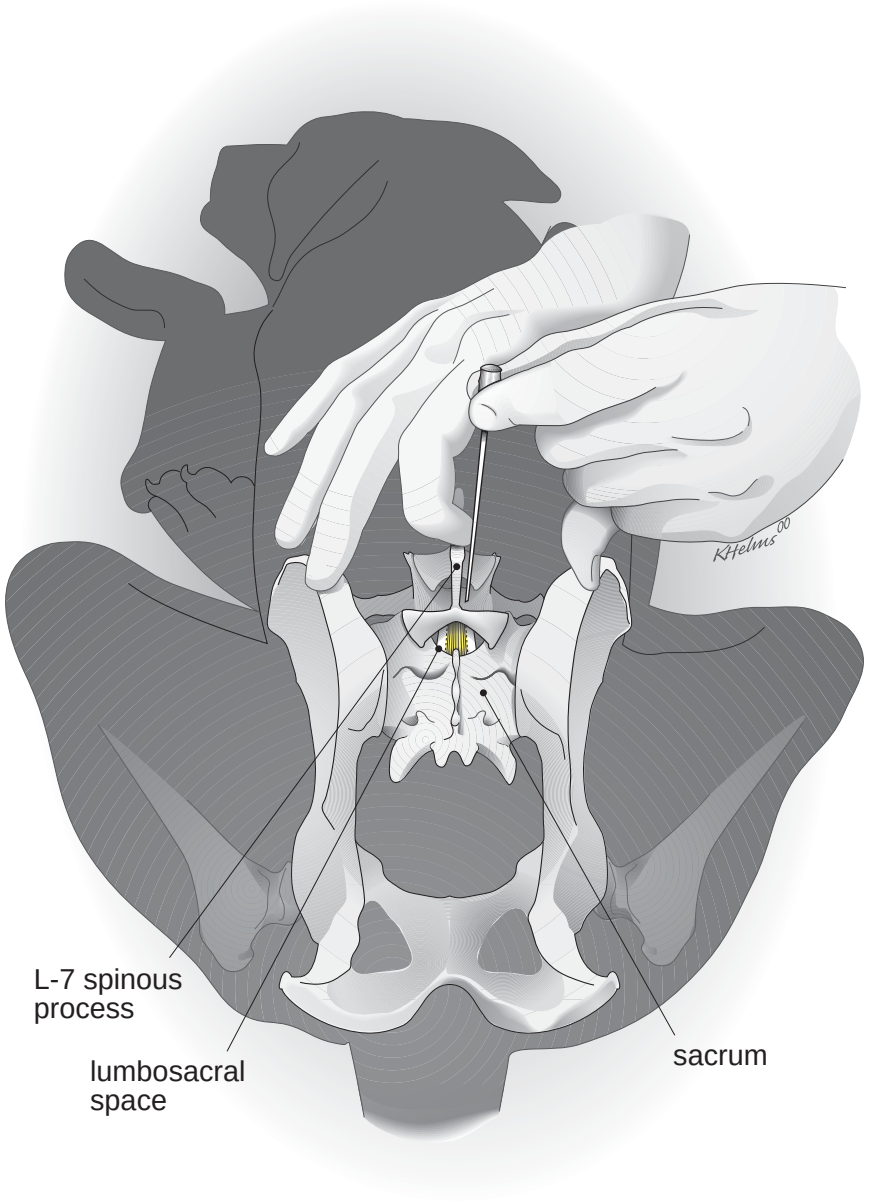

Figure 3-1
Anatomic landmarks for epidural technique

Following injection the needle is withdrawn and the surgical site is placed ventrally in order to facilitate the movement of analgesic drug to the correct side of the spinal cord. Other signs indicating correct needle placement may include twitching of the tail muscles and a change of respiratory pattern during injection. If blood flows out of the needle, it can be withdrawn and flushed, then reinserted (with the stylet in place). If cerebrospinal fluid flows out of the needle and the decision is made to inject analgesic into the subarachnoid space, the dose volume should be reduced by at least 50%.

Materials Needed

Spinal needle - Quincke or Huber point 22-18 gauge

1.5 to 2.5 inch sterile syringe

Sterile gloves

Drugs and Dosages

Lidocaine (2%) or bupivacaine (0.25%-0.5%) with or without epinephrine. Dose is 1 ml / 4.5 kg for caudal procedures or 1 ml / 3.5 kg for abdominal procedures. Duration is prolonged 1.0 to 1.5 hours when combined with epinephrine. When diluting drugs with saline or local anesthetic, keep the total epidural injection volume below 0.25 ml/kg. Lidocaine provides 1-3 hours, while bupivacaine provides 4-6 hours of analgesia.

Morphine with preservative (15 mg/ml); (0.1 mg/kg combined with 1.0 ml of saline or local anesthetic / 4.5 kg body weight).

Preservative-free morphine (1.0 mg/ml); (0.1-0.3 mg/kg); a 0.2 mg/kg dose is equal to a volume of about 1.0 ml / 4.5 kg body weight undiluted.

Preservative-free fentanyl (50 micrograms/ml); 5-10 micrograms/kg, in the dog.

Preservative-free buprenorphine (300 micrograms/ml); 5-20 micrograms/kg, in the dog, 5-10 micrograms/kg, in the cat.

Local anesthetics and morphine are commonly combined at the above dosages to enhance epidural analgesia.