**Technique for the Distal Paravertebral Nerve Block**

**Procedure:**

10-20 ml of 2% lidocaine (we used 20 ml at each vertebrae) is injected to each site, **onset occurs usually within 10 minutes of injection. The lidocaine was given at approximately 3:21 p.m. in our demonstration.** The dorsal and ventral rami of the spinal nerves T13, L1 and L2 are desensitized at the distal ends of L-1, L-2 and L-4. A 7.5-cm, 18-gauge needle is inserted ventral to the tips of the respective transverse processes in cows where approximately 10-20 ml of a 2% lidocaine solution are injected in a fan-shaped infiltration pattern. The needle is completely withdrawn and reinserted dorsal to the transverse process, where the cutaneous branch of the dorsal rami is injected with about 5 ml of the analgesic. The procedure is repeated for the second and fourth lumbar transverse processes. 10-20 ml 2% lidocaine is used per site and onset and duration similar to proximal technique, i.e. 90 minutes duration.

**Lidocaine**
Duration of action is variable (depending on uptake) but will be around 1 hour without epinephrine, and 2 hours with epinephrine.

**Mechanism of Action of Local Anaesthetic Block**

LAs block nerve conduction by inhibiting influx of sodium ions through ion-selective sodium channels in nerve membrane leading to impairment of the generation of action potential. The sodium channel itself is a specific receptor for local anaesthetic molecules.

**Note from video attached:**

Performing the paravertebral block (Regional block), we achieve anaesthesia of paralumbar fossa by targeting 3 specific nerves. T13, L1 and L2.