**ANAESTHESIA (IVRA)**

IVRA is needed to provide regional anaesthesia to the area of the hoof so that pain and sensation is removed during any procedure/surgery done on the hoof. IVRA blocks the limb to provide local analgesia to area below tourniquet. Used for surgery on the foot such as amputation of a digit, tumor removal.

**Technique**

1. Adequately restrain animal.
2. Apply tourniquet proximal to carpus/tarsus. Allow a few minutes for vein to engorge
3. Clean and shave the area to be injected
4. Insert a butterfly catheter into the vein, and then inject 5-10 ccs of lidocaine with syringe.
5. Exsanguination is sometimes done at this step before injection of anaesthetic.
6. Remove needle, apply pressure immediately and massage to prevent haematoma
7. Wait 10 - 15 minutes for drug to take effect
8. Leave tourniquet in place for maximum 90 minutes to maintain effect of anaesthesia

**Advantages of IVRA in Cattle**

* Possible to perform surgery on a standing animal, reduce risks associated with general anesthesia, no need for anesthesiologist
* Use of local anesthesia reduces volume of general anaesthetics, if used Low risk of infection
* Rapid effect of analgesia
* Simple technique
* No complex equipment required

**Landmarks**

* 1. Forelimb
* Dorsal metacarpal vein
* Palmar digital vein
* Dorsal digital vein
  1. Hindlimb

-Lateral saphenous vein, cranial or lateral branches

-Lateral plantar digital vein

-Lateral plantar vein