

ANIMAL BEHAVIOUR & WELFARE STANDARD OPERATING PROCEDURE

Cornual Nerve Block and Disbudding

General:

This SOP outlines the general procedure that is to be used when administering local anaesthetic into the cornual notch and around the horn buds and disbudding of cattle.

Drugs:

PAR: Lignocaine HCl

Class: Class 1

Trade Names: Bomacaine, Lopaine 2%, Local, Nopaine 2%

Active Ingredient: 20mg/ml Lignocaine HCl

Directions for Use:

Dose: 4-6ml per horn (2-3ml for the corneal notch, 2-3ml for infiltration)

Frequency: Single

Route/Site: Cornual notch plus subcutaneous infiltration around the horn bud if required

Equipment: 5-6 ml syringe

20 to 21 gauge 1 inch needle

Sharps container

Equipment:

- Personal protective equipment – overalls, boots (preferably steel-capped), arm guard etc
- Restraint device
- Equipment for corneal nerve block – see above
- Gas or electric disbudding iron
- Antiseptic spray

Restraint:

Secure the animals head to prevent jerking during administration of local anaesthetic and disbudding. A head bail is recommended.

Personnel:

Only persons trained and approved for corneal nerve blocks and disbudding will carry out the procedure.

Procedure:

Local Anaesthetic

1. Restrain the animal in a head bail
2. Inject 2-3ml of local (2% lignocaine hydrochloride) at the midpoint between the lateral corner of the eye and the horn bud and just ventral to the facial crest (the corneal notch), at a depth of about 1cm
3. A combination of local injected into the corneal notch and subcutaneous infiltration around the horn bud can be used and provides a superior analgesia to the corneal notch alone.
4. Subcutaneously infiltrate the area surrounding the horn bud with local anaesthetic.

5. Three to four injections will be needed, totalling 2-3ml of local been infiltrated per horn bud
6. Inject in a circular pattern, massaging the local into the tissue each time
7. Wait 10 minutes between time of injection and disbudding

Disbudding

1. Either electric or gas heated instruments can be used. Electric tools have the advantages of creating less smoke fumes. Gas fired cautery instruments also carry a danger of burning calves and operators with the flames ejected at the side of the instrument, therefore wear appropriate protective equipment
2. Perform using a hot, sharp cautery iron of the correct size. A head size of 18mm diameter is best for most calves
3. Press the hot sharp tip onto the horn bud. The cut should be completed in approx 5-6 seconds
4. The tip should fall through the skin, with a characteristic popping sensation occurring when the skin is fully cut through.
5. If the cut takes longer than suggested, the tip is either cold or blunt, or not enough pressure is being exercised
6. If the cut takes less time to complete, more haemorrhaging will occur because blood vessels will not be cauterised
7. It is extremely important to keep the tip at more or less right angles to the skin of the calf's head.
8. Positioning the tip too flat will result in too much heat transferred into adjacent skin with subsequent necrosis and abscess formation
9. Scooping the bud out after cautery is not technically necessary as horn growth occurs from the ring of germinative tissue around the base of the bud, not the centre. It is however a good check on the completeness of the skin cut and therefore recommended
10. After disbudding, wounds should be sprayed with an antiseptic solution such as iodine

Expected treatment Outcome:

Following corneal nerve block the calves should be able to be disbudded safely with a minimum of pain and distress. Future horn growth should not occur.

Unexpected outcomes:

If the calf struggles during disbudding it is likely that either not enough time was allowed between the injection of local and disbudding and/or improper placement of the local anaesthetic. Failure to achieve a successful block is often a result of injecting too deeply. A combination of local injected into the corneal notch and local infiltration gives a superior effect to that of the corneal notch alone.

Drug Storage: Drug Safe

Controlled Drug Register: Drug Safe

Drug Disposal: To waste with water