**Block of the Cornual Branch of Lacrimal Nerve**

Pre-procedure

**Signalment**

Cow #126: a 2-2½ y.o. intact cow with a body condition score of 3.0/5 (Penn State scale) and an approximate weight of 450kg

Bright, alert and responsive (BAR)

Physical examination was generally satisfactory, with the exception of a healing wound on her left flank

TPR values were within normal range

Temperature: 39oC

Pulse rate: 58bpm

Respiratory rate: 40 breaths/min

**Use of drugs**

In order to conduct this block of the cornual branch of the lacrimal nerve, 10ml of 2% lidocaine was administered to the cow. Proper knowledge of the anatomy is necessary before administering the local anaesthetic. The cornual branch of the lacrimal nerve merges from the orbit caudal to the frontal process of the zygomatic bone (root of the supraorbital process). It is lateral to the frontal crest.



In the event of an emergency, drugs may need to be utilized to reverse the effects of any sedative/anaesthetic used. In this procedure, the following drugs were intended for use as emergency drugs:

* Atropine at 33.3mL

 $Volume=\frac{450 kg ×0.04 mg/kg}{0.54 mg/ml}$

 $Volume=33.33 ml$

* Epinephrine at 9mL

$$Volume=\frac{450 kg ×0.02 mg/kg}{1 mg/ml}$$

$$Volume=9 ml$$

* 10% Tolazoline at 0.12mL (0.24mL for mild cases and 0.48mL for severe cases if xylazine was used for chemical restraint)

$$Volume\_{1}× Conc.\_{1}=Volume\_{2}×Conc.\_{2}$$

$$0.6ml×20\frac{mg}{kg}=Volume\_{2} ×Conc.2$$

*12mlmg/kg= Volume2 x 100mg/kg*

*Volume2= 12mlmg/kg/ 100 mg/kg*

*Volume2= 0.12ml*

For mildly depressed animals: **2** times xylazine dose: 0.12 ml x 2= *0.24ml*

For severely depressed animals: **4** times xylazine dose: 0.12 ml x 4= *0.48ml*

**Equipment**

* Halter for restraint
* Cotton swabs soaked in 70% isopropyl alcohol
* 19-gauge 1” needles
* 10ml syringe
* 2% Lidcocaine
* Atropine
* Epinephrine
* 10% Tolazonine