**Table of Drugs Given During the Castration**

**Calf was estimated at to be 100kg**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Drug** | **Use** | **Concentration (mg/ml)** | **Dose (mg/kg)** | **Toxic dose** | **Calculations**  **(dose (mg/kg) x weight (kg))**  **÷ conc. (mg/ml)** | **Volume given** | **Injection site** |
| Xylazine | Sedative | 20mg/ml | 0.05mg/kg | - | (0.05mg/kg x 100 kg)  ÷ 20mg/ml  = 0.25ml | \*1  5ml + 2.5ml | IM |
| Lidocaine | Local anaesthetic | 20mg/ml | 5 mg/kg | 10 mg/kg | (5 mg/kg x 100kg) ÷ 20mg/ml  = 25ml | \*2  16ml | IM |
| Flunixin | Analgesia | 50mg/ml | 1.1mg/kg | - | (1.1mg/kg x 100kg) ÷ 50mg/ml = 2.2ml | 2.2ml | IV |
| Pen Strep | Antibiotic | 200,000UI/mL | 20,000UI/Kg | - | (20,000UI/kg x 100kg)  ÷ 200,000UI/mL = 10ml | 10ml | SC |
| **Drugs that were not used but were calculated** | | | | | | | |
| Tolazoline | Xylazine reversal drug | 100 mg/ml | 0.1mg/kg | - | (0.1mg/kg x 100kg) ÷100 mg/ml = 0.1ml | - | IV |
| Epinephrine | Anaphylaxis | 1mg/ml | 0.02 mg/kg | - | (0.02 mg/kg x 100 kg) ÷ 1mg/ml = 2ml | - | IV |

\*Due to how small of a volume was supposed to be given Xylazine was diluted with saline to make a 0.1% solution. Th e dose given is the dilute solution.

If there is 20mg in 1ml then there is 10ml in 0.5 ml of xylazine.

Since there is 10mg of xylazine in 0.5ml, if it is diluted with 9.5ml of saline there is now 10mg of xylazine in 1ml of solution

Concentration of dilute xylazine is now 1mg/ml.

Therefore, (0.05mg/kg x 100kg) ÷ 1mg/ml = 5ml was given

An extra 2.5ml of solution was given to maintain sedation as animal was beginning to become restless.

\*2 All 25ml wasn’t used. 4ml was given intra testicular, 2ml in spermatic cord and 2 just under the skin. This was done on both sides of the scrotum.