**Calculations – Sheep R44 – 35.3kg**

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| **Drug** | **Concentration** | **Dose Rate** | **CALCULATIONS** | **Withdrawal** | **Indication for use** |
| 1. Pennstrep  (antibiotic) | 200,000 IU/ml | 30,000 IU/kg | V= 35.3kg x 30,000 IU/kg) /200,000 IU/ml = 5.3 mls IM | 30 DAYS | Antibiotics  5mls  q3d x 2 |
| **2. Sedation**  Xylazine  Ketamine | 20 mg/ml  100mg/kg | 0.05mg/kg  0.5mg/kg | (X)V=(0.05x35.3)/20 = 0.088mls  (K)V=(0.5x35.3)/100= 0.177mls | 14 days meat  48 hrs milk | 1/10 the equine dose  +/- 45 min of anaesthesia |
| 3. Flunixin  Tetanus antitoxin | 50mg/ml  300IU/ml | 2.2mg/kg | V = (2.2 x 35.3)/50 =  1.55 mls IV - Slow Iv admin - 1 ml/second  600IU (2mls) | Meat 4 days | preemptive analgesia & post-op for three days. |
| **4. EPIDURAL**  Bupiv/Ket | (B) 5mg/ml  (K) 100mg/ml | (B) 0.25mg/kg  (K) 1.25mg/kg | ***(B)V = (0.25x35.3)/5 = 1.77ml***  ***(K)V = (1.25x35.3)/100 = 0.44ml*** | Bupivacaine– none | Toxic dose 2 mg/kg  =20mls |
| 5. Ketamine  **Induction** | 100mg/ml | 5mg/kg | V = (5 x 35.3)/100 =  1.77 mls IV | 3 days meat  24 hrs milk | *Balanced anaesthesia* |
| 5. Lidocaine  **(Anaesthetic - Induction)** | 20mg/ml | 1.0 mg/kg | V = (1.0 x 35.3)/20 =  1.77 mls IV | 1 day meat  24 hrs milk | Toxic dose 10 mg/kg |
| **6.** **Xylazine**  **(Anaesthetic)**  **CRI** | 20 mg/ml | 0.05 mg/kg/hr | ***M = DV & V = M***  ***IR C***  0.05 x 1000  5  = 10mg …10/20 = **0.5 mls** | 14 days meat  48 hrs milk | Continuous analgesia for the 2 hrs of surgery |
| 6. Ketamine  **CRI** | 100mg/ml | 5mg/kg/hr | ***M = DV & V = M***  ***IR C***  5 x 1000  5  = 1000mg ….1000/100 = **10mls** | 3 days meat  24 hrs milk | Continuous analgesia for the 2 hrs of surgery |
| 6. Lidocaine  **CRI** | 20mg/ml | 1.0 mg/kg | ***M = DV & V = M***  ***IR C***  1 x 1000  5  = 200mg .200/20 = **10mls** | 1 day meat  24 hrs milk | Toxic dose 10 mg/kg  =17.65mls |
| 7. Intra-op Fluids  0.9%Saline (use 1L bag) | Calculated of Drip Rate in drops per sec - (ml/min x drip factor)/60 = drops/sec  - (176.5/60) x 20 = 56.3 / 60 = 0.98 = 1 drop/sec  60 | | | | |
| Tolazoline  (Xylazine Reversal) | 100mg/ml | 4 x xylazine dose  =0.2 mg/kg | V = (0.2x35.3)/100 = 0.071mls | None for food animals | Xylazine reversal |
| Atropine | 0.54 mg/ml | 0.04 mg/kg | V = (0.04 mg/kg x 35.3 kg) /  0.54 mg/ml  V = 2.6 ml (1.4mg/35.3Kg) | 14 days meat  3 days milk | Use if bradycardia < 30 bpm |
| Epinephrine | 1mg/ml  (1:1000) | 0.02  mg/kg | V = (0.02 mg/kg x 35.3 kg) /  1 mg/ml  V = 0.71 ml | No WDT | Anaphylactic reactions |

**Ketamine + Xylazine for breakthrough = half sedation dose (0.088ml xylazine + ketamine 0.177ml) PRN**

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**Drug (mg) = [Infusion rate of the drug (mg/kg/hour) ÷Fluid infusion rate (ml/kg/hour)] x diluent volume (ml)**

***M = DV & V = M***

***IR C***

Rate of Fluid delivery = 5 ml/kg/hr

=5 x 35.3=**176.5ml/hr**

Drop factor = 20 drops/ml

Tetravet Spray:

**Active ingredients:** Oxytetracycline hydrochloride @25mg/mL and gentian violet @2mg/mL.

**Indications:** for the treatment of topical infections caused by, or associated with, organisms sensitive to oxytetracycline hydrochloride and gentian violet in all species except fibre-producing animals; for the treatment of cuts and wounds.