**Calculation used Sheep R34 of weight 43.8kg.**

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| **Drug** | **Concentration** | **Dose Rate** | **CALCULATIONS** | **Withdrawal** | **Indication for use** |
| Penstrep  (antibiotic) | 200,000 IU/ml | 40,000 IU/kg | V= 43.8kg x 20,000 IU/kg)/200,000 IU/ml = 4.38 mls IM  8ml were given to the animal as a precaution | 30 DAYS | Antibiotics  5mls  q3d x 2 |
| Xylazine  Pre-Anaesthetic)  Induction | 20 mg/ml | 0.05mg/kg IM=5mg | V=(0.05x43.8)/20 = 0.1ml IV  Make up to 2 mls with saline | 14 days meat  48 hrs milk | 1/10 the equine dose  +/- 45 min of anaesthesia |
| Xylazine  (Anaesthetic)  CRI | 20 mg/ml | 0.04 mg/kg/hr OR  0.66  mcg/kg/min | *M = DWV*  *16.67R*  0.66 x 43.8 x 1000  16.67 x 250  = 6.9mg …… 6.9/20 = 0.35ml  0.4ml were placed in CRI | 14 days meat  48 hrs milk | Continuous analgesia for the 2 hrs of surgery |
| Ketamine  (Anaesthetic - Induction) | 100mg/ml | 6mg/kg | V = (6 x 43.8)/100 =  2.63 mls IV  3ml were given | 3 days meat  24 hrs milk | *Balanced anaesthesia* with xylazine |
| Ketamine  (CRI) | 100mg/ml | 4mg/kg/hr  OR  66mcg/kg/min | *M = DWV*  *16.67R*  66 x 43.8 x 1000  16.67 x 250  = 693.65mg ….693.65/100 = 6.9ml  8ml were given in the lab | 3 days meat  24 hrs milk | Continuous analgesia for the 2 hrs of surgery |
| Flunixin  (analgesic) | 50mg/ml | 2.2mg/kg | V = (2.2 x 43.8)/50 =  1.9 mls IV - Slow Iv admin - 1 ml/second | Meat 4 days | preemptive analgesia & post-op for three days. |
| Lidocaine  L6-S1epidural | 20mg/ml |  | 5mls | 1 day meat  24 hrs milk | Toxic dose 10 mg/kg |
| Lidocaine  (Anaesthetic - Induction) | 20mg/ml | 1.0 mg/kg | V = (1.0 x 43.8)/20 =  2.2 mls IV | 1 day meat  24 hrs milk | Toxic dose 10 mg/kg |
| Lidocaine  (CRI) | 20mg/ml | 20 mcg/kg/  min | *M = DWV*  *16.67R*  20 x 43.8 x 1000  16.67 x 250  = 210.2mg ….210/20 = 10.5mls  12 mls were given in lab | 1 day meat  24 hrs milk | Toxic dose 10 mg/kg  =25mls |
| 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  250 x 20 = 167 / 60 = 2.78 = 1.5 drops/sec  60 | | | | |
| Tolazoline  (xylaxine reversal) | 100mg/ml | 4 x xylazine dose i.e.  0.1 mg/kg | V = (0.2x43.8)/100 = 0.087ml  If needed 0.09ml would have been given | None for food animals | Xylaxine reversal |
| Atropine | 0.54 mg/ml  <55bpm bradycardia  >140bpmtachycardia | 0.04 mg/kg | V = (0.04 mg/kg)(43.8 kg) / 0.54 mg/ml  V = 3.2 ml | 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)(43.8 kg) / 1 mg/ml  V = 0.88 ml  0.9ml would have been given if it were needed | No WDT | Anaphylaxic reactions |

**Ketamine + Diazepam for breakthrough – mix 1:1 and use 2 mls as a bolus PRN**



Rate of Fluid delivery = 5 ml/kg/hr

Drop factor = 20 drops/ml