**Calculation for the drugs**

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| **Drug** | **Concentration** | **Dose Rate** | **CALCULATIONS** | **Withdrawal** | **Indication for use** |
| Penstrep  (antibiotic) | 200,000 IU/ml | 40,000 IU/kg | V= 29kg x 20,000 IU/kg)/200,000 IU/ml = 5.8 mls IM | 30 DAYS | Antibiotics  5mls  q3d x 2 |
| Sedation Xylazine  Ketamine | 20 mg/ml  100mg/ml | 0.05mg/kg  0.5mg/kg | X= V=(0.05x29)/20 = 0.07mls  K= (0.5\*29)/100 = 0.145mls | 14 days meat  48 hrs milk | 1/10 the equine dose  +/- 45 min of anaesthesia |
| Xylazine  (Anaesthetic)  CRI | 20 mg/ml | 0.05mg/kg/hr | M= DV/IR & V=M/C  0.05\*1000/5=10mg  10/20=0.5mls | 14 days meat  48 hrs milk | Continuous analgesia for the 2 hrs of surgery |
| Ketamine  (Induction) | 100mg/ml | 5mg/kg | V = (5x 29)/100 =  1.45 mls (IV) | 3 days meat  24 hrs milk | *Balanced anaesthesia* with xylazine |
| Ketamine  (CRI) | 100mg/ml | 5mg/kg/hr | M= DV/IR & V=M/C  5\*1000/5=1000mg  1000/100=10mls | 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 29)/50 =  1.3mls IV - Slow Iv admin - 1 ml/second | Meat 4 days | preemptive analgesia & post-op for three days. |
| Epidural  Bupiv/ket | (B) 5mg/ml  (K) 100mg/ml | (B) 0.25mg/ml  (K) 1.25mg/ml | (B) V= (0.25\*29) =1.45ml  (K) V= (1.25\*29)/100=0.36ml  **Note: (1.45+0.4=1.85mls)**  **1.85+015 saline =2ml in total** | 1day meat  24 hrs milk | Toxic dose 10 mg/kg |
| Lidocaine  (Anaesthetic - Induction) | 20mg/ml | 1.0 mg/kg | V = (1.0 x 29)/20 =  1.45 mls IV | 1day meat  24 hrs milk | Toxic dose 10 mg/kg |
| Lidocaine  (CRI) | 20mg/ml | 20 mg/kg/  hr | M= DV/IR & V=M/C  1\*1000/5=200mg  200/20= 10mls | 1day 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 = 83/ 60 = 1.4 = 3 drops/2sec  60 | | | | |
| Tolazoline  (xylazine reversal) | 100mg/ml | 4 x Xylazine dose i.e.  0.1 mg/kg | V = 0.05\*4=0.2ml | None for food animals | Xylazine reversal |
| Atropine | 0.54 mg/ml  <55bpm bradycardia  >140bpmtachycardia | 0.04 mg/kg | V = (0.04mg/kg)\*(29kg)/0.54mg/kg=2.1ml | 14 days meat  3 days milk | Use if bradycardia < 30 bpm |
| Epinephrine | 1mg/ml  (1:1000) | 0.02  mg/kg | V = (0.02mg/kg)\*(29kg)/1mg/kg=0.58ml | No WDT | Anaphylaxic reactions |

**Ketamine + Xylazine for breakthrough = half sedation dose (0.07ml xylazine+ ketamine 0.145ml) PRN**

**2**

Rate of Fluid delivery = 5 ml/kg/hr

Drop factor = 20 drops/ml