**DRUG CALCULATIONS**

**(R34 – 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  (Given the lack of sterility in the operating room 8ml was used) | 30 DAYS | Antibiotics  5mls  q3d x 2 |
| **Xylazine**  **Pre-Anaesthetic)**  **Induction** | 20 mg/ml | 0.05mg/kg IM=5mg | V=(0.05x43.8)  20  = 0.12mls IV  Make up to 1 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 219  = 6.936mg …… 6.936/20 = 0.346 ml | 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 | 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 219  = 693.653mg ….693.653/100 = 6.94ml | 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 219  = 210.19mg ….210.19/20 = 10.5mls | 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  219 x 20 = 167 / 60 = 1.22 = 1 drops/sec  60  1drop/sec | | | | |
| **Tolazoline**  **(xylaxine reversal)** | 100mg/ml | 4 x xylazine dose i.e.  0.1 mg/kg | V = (0.2x43.8)  100  = 0.09mls | None for food animals | Xylaxine reversal |
| **Atropine** | 0.54 mg/ml  <55bpm bradycardia  >140bpmtachycardia | 0.04 mg/kg | V = (0.04 mg/kg) x (43.8 kg)  0.54 mg/ml  = 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) x (43.8 kg)  1 mg/ml  = 0.9 ml | No WDT | Anaphylaxic reactions |
| **Tetanus**  **Antitoxin** | 1500IU |  | 1.5ml SQ | 21 days | Prevention of tetanus |

**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