**DRUG TABLE: FOR SHEEP WEIGHING 37.7 KG**

**Table 1: Drugs Used and Calculations for Surgery (for a Sheep Weighing 37.7 Kg)**

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| Drug | Drug Type | Concentration | Dose | Calculations  (Weight of sheep: 37.7kg) | Withdrawal | Indications |
| Penstrep | Antibiotic | 200,000 IU/ml | 40,000 IU/kg | V= (W x D)/C  In lab Calculations:  V= (37.7 x 40000)/200000 = 7.54 mls | 30 Days | Treatment of infections caused by or associated with organisms sensitive to Penicillin or Streptomycin such as A*rcanobacterium pyogenes, Streptococcus spp and Listeria spp, Staphylococcus spp, Pasteruella multocida, Salmonella spp* etc. |
|  |  |  |  |  |  |  |
| Xylazine | Pre- Anesthetic induction | 20mg/ml | 0.05 mg/kg | V= (W x D)/C  In lab Calculations:  V= (37.7 x 0.05)/20 = 0.0943 mls | 14 days meat  48 hours milk | Continuous analgesia & anesthesia |
|  | Anesthetic CRI | 20mg/ml | 0.66 mcg/kg/min | M= DWV / 16.67\*R  In lab Calculations:  M=(0.66 x 37.7 x 1000)/[16.67 x (5x37.7)]=  7.9 ml...7.9/20=  0.4mls |  |
|  |  |  |  |  |  |  |
| Ketamine | Anesthetic Induction | 100mg/ml | 6mg/kg | V= (W x D)/C  In lab Calculations:  V=(37.7x6)/100=2.26 mls | 3 days meat  24 hours milk | Balanced continuous anesthesia with Xylazine |
|  | Anesthetic CRI | 100mg/ml | 66mcg/kg/min | M= DWV / 16.67\*R  In lab Calculations:  M=(66 x 37.7 x 1000)/(16.67 x 188.5)=  792ml...  790/100=  7.9mls |  |
|  |  |  |  |  |  |  |
| Lidocaine | Anesthetic Induction | 20mg/ml | 1mg/kg | V= (W x D)/C  In lab Calculations:  V=(37.7x1)/20=1.89mls | 1 day meat  24 hours milk | Anesthetic (local)  Toxic dose: 10mg/kg  In lab Calculations:  V=(37.7x10)/20= 18.85 mls |
|  | Anesthetic CRI | 20mg/ml | 20 mcg/kg/  min | M= DWV / 16.67\*R  In lab Calculations:  M=20 x 37.7 x 1000/(16.67 x 188.5) = 240ml…240/20 =12mls | Toxic dose: 10mg/kg  In lab Calculations:  V=(37.7x10)/20= 18.85 mls |
|  |  |  |  |  |  |  |
| Flunixin | NSAID Analgesic | 50mg/ml | 2.2mg/kg | V= (W x D)/C  In lab Calculations:  V=(37.7x2.2)/50= 1.66mls | Meat 4 days | preemptive analgesia & post-op for three days |
|  |  |  |  |  |  |  |
| 0.9% Saline | Intra- Op fluid |  |  | Drops/sec=  [(fluid rate x weight x drip factor) /60]/60  In lab Calculations:  Drops/sec=  [(188.5 x 20)/60]/60=  1.0 drops/sec |  |  |
| Isoflurane | Inhalant Anesthetic | 2% |  |  |  | Anesthetic |
| Diazepam | Anesthetic  (induction) | 5mg/ml |  | V= (W x D)/C |  |  |

**Ketamine + Diazepam for breakthrough – mix 3:1 and use 2 mls as a bolus PRN**

Formulae:

* V = (D x W)/C

Where: V – Volume of Dosage given to animal (mls)

D – Dose of drug (mg/kg)

W – Weight of animal (kg) – 37.7kg

C – Concentration of the drug (mg/ml)

* M = (D x W x V)/(R x 16.67)

Where: M – Number of mg of drug to add to delivery fluid

D – Dosage of drug in mcg/kg/min

W – Patient body weight in kg – 37.7kg

V – Volume in ml of delivery fluid = 1000mls

R – Rate of delivery in ml/hr = Fluid rate (5ml/kg/hr) x Weight (37.7kg) = 188.5 ml/min

16.67 – Conversion factor

* Rate of delivery of Fluid – 5ml/kg/hr
* Drop Factor – 20 drops/ml

**Table 2: Emergency/Reversal Drugs and Calculations (For a Sheep Weighing 37.7 Kg)**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Drug** | **Drug Type** | **Concentration** | **Dose** | **Calculation** | **Withdrawal** | **Indications** | **Contraindications** | **Side Effects** |
| **Tolazoline** | Xylazine Reversal | 100mg/ml | 4 x xylazine dose i.e.  4 x 0.5 = 0.2 mg/kg | V=(W x D)/C  In lab calculation:  V=(0.2 x 37.7)/100 = 0.0754 ml | No WDT for food animals | Used when it is desirable to reverse the effects of sedation and analgesia caused by Xylazine. | Avoid giving overdoses of this drug, especially to animals with cardiac or circulatory compromise. Do not give to animals exhibiting signs of stress, debilitation, cardiac disease, sympathetic blockage, hypovolemia or shock. | Tachycardia; peripheral vasodilatation, evidenced by bright pink to dark red mucous membranes of the gingiva and conjunctiva; and hyperalgesia of the lips, evidenced by licking or flipping of the lips even before the injection is completed. All side effects should dissipate within 30-60 minutes. |
| **Epineph-rine** | Sympath-omimetic agents | 1mg/ml | 0.02mg/kg | V=(W x D)/C  In lab calculation:  V = (0.2 x 37.7)/ 1 = 0.754 mls | No WDT | Epinephrine is a powerful, quick-acting vaso- constrictor for emergency use in the treatment of anaphylactic shock. Also for cardiac resuscitation | Narrow-angle glaucoma, hypersensitivity to epinephrine, shock due to non-anaphylactoid causes, during general anesthesia with halogenated hydrocarbons, during labor (may delay the second stage), cardiac dilatation or coronary insufficiency; cases where vasopressor drugs are contraindicated (e.g., thyrotoxicosis, diabetes, hypertension, toxemia of pregnancy) Epinephrine may compromise circulation if injected into areas with end artery blood flow (e.g. ears, digits, tail) and therefore, this product should not be used in these areas. | Anxiety, tremor, excitability, vomiting, hypertension (over dosage), arrhythmias, hyperuricemia, & lactic acidosis (prolonged use or over dosage) Repeated injections can cause necrosis at the injection site. |
| **Atropine** | Anticholi-nergic agent | 0.54mg/ml | 0.04mg/kg | V=(W x D)/C  In lab calculations:  V = (0.04 x 37.7)/0.54 = 2.79 mls | 14days meat  3 days milk | Pre-anesthetic to prevent or reduce secretions of the respiratory tract. Treat sinus bradycardia, sinoatrial arrest, and incomplete AV block. Differentiate vagally mediated bradycardia for other causes. Should be used if bradycardia is <30bpm. | Contraindicated in conditions where anticholinergic effects would be detrimental (e.g., narrow angle glaucoma, tachycardia, ileus, urinary obstruction, etc.) | GI effects can include dry mouth (xerostomia), dysphagia, constipation, vomiting, and thirst. GU effects may include urinary retention or hesitancy. CNS effects may include stimulation, drowsiness, ataxia, seizures, respiratory depression, etc. Ophthalmic effects include blurred vision, pupil dilation, cycloplegia, and photophobia. Cardiovascular effects include sinus tachycardia (at higher doses), bradycardia (initially or at very low doses), hypertension, hypotension, arrhythmias (ectopic complexes), and circulatory failure. |

**Table 3: Antiseptics and Larvicide**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Class of drug | Name of drug | Active Ingredient | Description | Indications | Adverse effects | Dosage | Other |
| Antibiotic and  Antiseptic | Tetravet | Oxytetracycline hydrochloride  Gentian violet | The oxytetracycline hydrochloride is a broad spectrum antibiotic . The gentian violet component is antiseptic and is used to protect against both fungal and bacterial injections. | Used to prevent infection in cuts, abrasions and other breaks in the skin. | Can cause irritation in deep open wounds  Causes staining of the affected area | Use as needed (enough to cover the affected area) | Tetravet is used prior to the larvicid(larvicid) allowing the antibiotic and antiseptic effects to act on the wound . Larvicid prevents maggot infections. |
| Larvicide | Larvicid | Dimethyl dichlorovinyl phosphate(acetylcholinesterase inhibitor) | Organophosphorus insecticidal spray which has added antiseptic properties. | Prevention of myasis in open wounds(prevent egg laying as well as kills the existing larvae)  Post surgical wound care also preventing myasis | Signs of organophosphate poisoning:  Hypersalivation, increased sweating, vomiting , diarrhea, abdominal pain, blurring of vision | Use as needed (enough to cover the affected area) | Toxic residues can affect the user through inhailation, intradermal absorption or accidental ingestion.  Safety masks and gloves should be worn to prevent toxicity in user.  Antidote for toxicity is pralidoxime or atropine sulphate. |