The weight of this animal was estimated to be around 450kg (using the severed head as a guide)

| Drug | Active  Ingredient | Uses | Contraindications | Adverse  Effects | WDT | Concentration and Dose | Calculations |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Xylazine | Xylazine | It is an Alpha-2-Adrenoceptor stimulant that results in sedation, muscle relaxation and analgesia | This drug should not be used in:  - animals with cardiac and respiratory distress.  -animals with renal or hepatic  -animals suffering from hypotension  - cows in the last trimester of pregnancy  -cows receiving ovum implants  - ruminants that are debilitated, dehydrated or have a urinary tract infection.  When given the animal should remain in sternal recumbency to avoid bloat. | Sweating  Piloerection  Tremors  Ruminal Tympany  Hypersalivation  Diuresis  Penile Prolapse  Hypothermia  Regurgitation  Ataxia  Premature Parturition | Meat:  1 days  Milk:  0 days | Dose : 0.05mg/kg  Conc- 20mg/ml | V = (WD)/C  = (450kg x 0.05/kg)/ 20mg/ml  =1.125 mls |
| Ketamine | 2-(2-chlorophenyl)-2-(methylaminocyclohexan-1 | This drugs is used for general anesthesia during surgery.  It is an induction agent. | Should not be used in patients with significant hypertension, heart failure and/or aterial aneurysms as it can be dangerous. This drug should not be used alone as it does not cause muscle relaxation. | Inability to move rigid muscles, increase in body temperature, rapid heartrate, convulsions and coma. | Meat: 3 days  Milk - 48 hours | Conc- 100mg/ml  Dose: 2mg/kg | V = (WD)/C  = (450 kgx2mg/kg)/  100mg/ml  =2.25 mls |
| Lidocaine | Lidocaine  Hydrochloride | This drug :  -Can block the conduction of nerve fibres resulting in muscle paralysis and loss of sensation  - it can also block the conduction pathways in the myocardial cells  - used for topical, infiltration, intravenous, regional and conduction anesthesia.  - used in extradural and spinal injections  - lastly is can decrease the rate of ventricular firing, the action potential duration, the absolute refractory period and will increased the relative refractory period. | If it is being used in conjunction with Epinephrine,  Do not use in:  -Intra-articular administration  -Epidural administration  - Intradigital administration  -Intravenous administration  -Treatment of ventricular arrhythmias  - Cardiac and Hepatic insufficiency | .Overdose  -Convulsions followed by CNS depression | Meat - 28days  Milk - 15days | Concentration - 20mg/ml  Dose-1.0mg/kg | V = (WD)/C  = (450kg x 1.0mg/kg) / 20mg/ml  = 22.5 mls  (for subconjunctival injections no more than 1 ml should be given) |
| Tolazoline | Tolazoline Hydrochloride | This drug is a sedative antagonist, it is an Alpha-adrenoceptor blocking drug, it reverses the effects of xylazine.  How does it do this?  Xylazine is a Alpha-2-adrenoceptor, since Tolazoline blocks these alpha adrenoceptors it will displace xylazine | Do not use in animals showing signs of stress, Debilitation, cardiac disease, hypovolemia or shock. | Causes gastrointestinal disturbances, tachycardia and mild hypertension | Meat - 96 hours  Milk - 48 hours | Conc - 20mg/ml  Dose- 0.1mg/kg | V = (WD)/C  = (450 kgx0.1mg/kg)/ 20mg/ml  = 2.25 mls |
| Proparacaine | Proparacaine hydrochloride | Numb the eye before eye surgeries | Prolonged use can cause permanent corneal opacification with visual loss | Prolonged use can delay wound healing | None | Within 1 min and can last for 15 - 30 mins | - For tonometry, instill 1 drop to 2 drops immediately before measurement is made.  - For use as an aid in the treatment of otitis, instill 2 drops into the ear every 5 minutes for 3 doses.  - For minor surgery, instill 1 drop or more drops |
| Combikel 40 LA | Pen-strep (procaine benzylpenicillin, dihydrostreptomycin sulphate) | An antibiotic that combats gram positive and gram negative bacteria | In animals with shock, septicemia, the absorption of the antibiotic can be diminished therefore it should not be used on these animals. | Hypersensitivity and CNS effects | Meat: 30 days  Milk:10 days | Dosage : 40,000IU/kg  Concentration: 200,000 IU/ml | V = (D x W)/C  = (40,000 x 450) / 200,000  = 90 ml  Administered 2x every 3 days |
| Banamine | Flunixin Meglumine | This is an NSAID that for is used for the treatment of fever and inflammation associated with bovine respiratory disease and acute mastitis | Should not used in cows with hypersensitivity reactions. IM route should only be used when IV route is not available since using IM can cause tissue reactions/ irritations. | Can cause anaphylactic reaction, gastrointestinal irritation, ulceration, vomiting. | 12-48 hours for milk cows and 5-14 days for beef | Dosage : 2.2 mg/kg  Concentration: 50 mg/ml | V = (D x W)/C  = (2.2 x 450) / 50  = 19.8 ml |
| Tetanus | Tetanus antitoxin | Recommended for use in immunocompromised animals (eg goats) or those who have suffered wounds that may or may not been contaminated with soil | Do not use in animals with history of hypersensitivity reactions | Can cause anaphylactic shock | Meat: 21 days  Milk: 24 hours | Dose rate: 1-2 mg/kg  1500 units SC/IM for prevention | Prevention dosage:  1500 units SC/IM |
| Povidone-  Iodine  solution | Povidone- Iodine (titratable iodine 1.0%) | It is a topical, bacterial, virucidal and fungicidal agent.  It liberate Free iodine, which kills eukaryotic/prokaryotic cells through iodination of lipids and oxidation of cytoplasmic and membrane compounds.  Used for antiseptic preparation of surgical sites, treatment of infections, teat dip, navel dip, uterine lavage and wound disinfection. | When the colour is lost, this indicates a reduction in activity. Do not use together with other disinfectants, detergents and antiseptics. | Iodine toxicity, irritation to the skin | None | Contact time must be for atleast 2 minutes for the solution to be effective, therefore rapid rinsing or removal of the solution before 2 minute is up reduces the effect. |  |
| Neomycin  Sterile ointment | Neomycin sulfate | Antibiotic ointment or Eye drops | Prolonged administration can cause overgrowth of organism that are not susceptible to neomycin | Elevation of intraocular pressure with possible development of glaucoma    Infrequent optic nerve damage    Posterior sub capsular cataract formation    Delayed wound healing | None | Administer 3 - 4 x daily (opthalmic) | Not indicated |
| Atropine | Atropine Sulfate | This drug can act as a pre-anaesthetic to either reduce or prevent secretions from the respiratory tract. (Treat the effects of Xylazine)  Also treats sinus bradycardia. | DO NOT USE: in patients with glaucoma, myocardia ischemia, has a hypersensitivity to anticholinergic drugs, severe ulcerative colitis, obstructive uropathy. | Adverse effects include:  -dry mouth  -dysphagia  -constipation  -urinary retention  -drowsiness  -ataxia  -respiratory depression  -seizures | Meat - 14 days  Milk - None | Concentration - 0.54mg/ml  Dose: 0.04mg/kg | V = (WD)/C  = (450kg x 0.04mg/kg)/0.54mg/ml  = 33.33mls |
| Epinephrine |  | Treat anaphylactic reactions | Hypersensitivity to epinephrine, narrow closed glaucoma, during general anesthesia with halothane | Anxiety, tremor, excitability, arrythmias, vomiting | None | Dose: 0.02mg/kg  Concentration: 1 mg/ml | V = (DxW)/ C  =( 0.02x450)/ 1  = 9 ml |
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