**CALCULATIONS**

 **Dosage = Dose(mg/kg) x weight (kgs) / concentration (mg/ml)**

**Pre-Anesthetic**

* **Xylazine** (Bomazine® 2% (Xylazine HCl, 20mg/ml)

 **–** 0.05 x 28.3/20

 = .07mls

**Induction Agents**

* **Ketamine** (Ketamine® 6mg/kg)

 **–** 6 x 28.3/100

 = 1.7mls

* **Lidocaine-** 1 x 28.3 /20

 = 1.42mls

* **Caudal** – 1ml of lidocaine + 1ml of bupivacaine

 **Epidural**

**Maintainence**

 **Constant Rate Infusion Calculations**

 **M = DWV/ 16.67R**

where: M = number of mg of drug to add to the delivery fluid

D = dosage of drug in mcg/kg/min

W = body weight of the patient in kg

V = volume in lm of delivery fluid

R = rate of delivery in ml/hr

16.67 = conversion factor

* **Rate of fluid –** 5 mg/kg/hr

 = 5mg/hr x 28.3 kgs

 = 141.5 mg/hr

* **xylazine**

 **-**  .66 x 28.3 x 1000/16.7 x 141.5

 = 7.92mg / 20mg/ml

 = 0.4mls

* **ketamine**

 **-** 66 x 28.3 x 1000/16.67 x 141.5

 = 791.84mg / 100mg/ml

 = 7.92 mls

* **lidocaine**

 **-** 20 x 28.3 x 1000/16.67 x 141.5

 = 239.95 mg / 20mg/ml

 = 12mls

**Drip Rate**

 **ml/min x drip factor / 60 = drops / sec**

 **=** 141.5ml/hr x 20 drops/ml / 60 x 60

 = .79 = 1 drop/sec

**Analgesics**

* **Flunixin**  (Banamine® (Flunixin meglumine, 50mg/ml)

 **=**  2.2 x 28 . 3 / 50

 = 1.25 mls

**Antibiotics**

* **Penstrep**

 **=**  40,000IU x 28.3 /200,000

 = 5.66ml

**Reversals and Emergency Drugs**

* **Tolazine**

 **4 x xylazine dose**

 **=** 0.2 x 28.3 / 100

 = .06 mls

* **Atropine =** 0.04 x 28.3 /.54

 = 2.1 mls

* **Ephinephrine=**  0.02 x 28.3 /1

 = 0.57 mls

**Toxic Doses**

* **Lidocaine =**  10 x 28.3 / 20

 = 14.15 mls

**SUMMARY TABLE**

|  |  |  |
| --- | --- | --- |
| Classification | Drugs | Dosage |
| Pre-Anesthetic | Xylazine | .07ml |
|  |  |  |
| Induction agents | Xylazine |  |
|  | Ketamine | 1.7ml |
|  | lidocaine | 1.42ml |
|  |  |  |
| CRI | xylazine | 0.4ml |
|  | ketamine | 8ml |
|  | lidocaine | 12ml |
|  |  |  |
| Reversal drug | tolazoline | .06ml |
|  |  |  |
| Emergency Drugs | Atropine | 2.1ml |
|  | Epinephrine | .57ml |
|  |  |  |
| Antibiotic | Penstrep | 5.66ml |
| Analgesic | Flunixin | 1.25ml |
| Toxic Dosages | Lidocaine | 14.15ml |
| Intra-Op Fluids | 0.9%Saline | 1 L |

**N.B Emergency drugs and reversals were calculated just incase they are needed drug the procedure.**

**Pre Operative Procedure**

The animal's hair was shaved at the proximal cranial aspect of the forelimb and a IV catheter inserted and secured in place using surgical tape. Xylazine was then administered intravenously to produce a sedative effect and to obtain a additive effect so that induction could be smooth and rapid. A caudal epidural is done between the prominent bones of the ileum just caudal at the lumbosacral joint. Half the ketamine that was pulled up was administered intravenously , immediately following up with intubation to assist the animal with respiration; to check for correct insertion the chest was compressed. The animal was placed in lateral recumbency and the monitoring machine connected. This was followed up with administration of the lidocaine induction agent Intravenously and the IV line flushed with heparinized saline. The drip line was then attached to the IV catheter at a rate of one drop per sec and adjusted based on the level of pain that the animals was feeling during the intra-operative procedure. Leads were applied to the animal but because of technical errors they were removed. The animal was draped appropriately and the drapes secured with a towel clamp. This was followed up by a dirty scrub using diluted chlorhexidine which succeeded a surgical scrub performed over the surgical area using alcohol and iodine alternatively for three consecutive scrubs. Once the animal was fully prepared and prepped the Intraoperative procedure was on its way.

Post-operative care

|  |  |  |
| --- | --- | --- |
| Post operative drugs | Dosage | Duration |
|  |  |  |
| Penstrep | 5.66ml | Once per day for 3 days (I.M) |
| Flunixin | 1.25ml | Once per day for 3days (I.V) |
| Tetanus antitoxin | 1.6ml | Given on first day (I.M) |

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Temperature(\*C) | Heart Rate(beats per minute) | Respiration(Breaths per minute) |
| 28/10/15 | 39.1 | 86 | 16 |
| 29/10/15 | 37.2 | 76 | 20 |
| 30/10/15 | 39.0 | 60 | 48 |
| 2/11/2015 | 39.2 | 72 | 32 |

-Anti-biotic(tetravet spray) and screw worm(Larvicid) was applied each day to incision site.

-Incision site was monitored for any abnormalities such as swelling