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| Drug Used | Notes | Calculations |
| Banamine (Flunixin Meglumine) - NSAID | Administered IV for pain control/relief.   * *Total dose should not exceed 2.2 mg/kg* * *Should not be used in bulls intended for breeding as the effects in these animals has not been investigated.* * ***Withdrawal period: Meat (4 days), Milk (36 hours)*** |  |
| Penicillin-Streptomycin (Antibiotic) | Broad spectrum antibiotic administered IM preoperatively   * ***Withdrawal period: Meat (21 days); Milk (3 days)*** * *Should not exceed 6 ml per injection site in cattle.* |  |
| Lidocaine (Local anaesthetic) | Administered IV to provide short-term pain control (1-2 hours).   * ***Withdrawal period: Meat (5 days); Milk (96 hours).*** * ***Toxic dose is 10 mg/kg, so try to stay at 5-7 mg/kg.*** | *10 ml of 2% lidocaine was injected at each site* |
| Xylazine (alpha-2 agonist) | Xylazine causes sedation, muscle relaxation and analgesia. It is also known for decreased GI motility (may cause bloat).   * ***Withdrawal period: Meat (5 days); Milk (72 hrs)***   Given via the IM route. |  |
| Ketamine | Ketamine produces a dissociated anaesthesia, whereby the patient appears awake but is unaware of their surroundings.   * ***Withdrawal period: Meat (3 days); Milk (48 hrs)***   Given via the IM route. |  |

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| Back-up Drugs | Use |
| Tolazoline | Reversal of the sedative and analgesic effects of xylazine if administered IV, at a dose of 2-4x that of xylazine.  Onset may occur within 5 minutes of administration depending on depth and duration of xylazine-induced sedation. |
| Epinephrine (1 mg/ml) | To counter Type I hypersensitivity reactions which are a major cause of adverse drug reactions. Via the IM/SC route at a dosage of 0.02 mg/kg |
| Atropine (1 mg/ml) | To lessen the cardiac depressing effects of xylazine, i.e. prevent bradycardia without affecting sedation.  Via the IM/IV route at a dosage of 0.04 mg/kg |