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| **DRUG** | **DOSE** | **EFFECTS** | **ADVERSE REACTIONS** | **DRUG CLASS** | **WITHDRAWAL TIME** |
| *Xylazine (2%)*  *(IM)* | ***Dose***: 0.05 mg/kg | Causes sedation, anesthesia, muscle relaxation and analgesia in many animals. It is 10–20 times more potent in ruminants than other species and is therefore used as a very useful sedative and analgesic in cattle, goats, and sheep | Bradycardia, decreased BP, decreased GI motility, increased intracranial pressure. | Potent Alpha 2 adrenergic agonist | Meat – 10 days  Milk – 3 days |
| *Flunixin Meglumine (5%)*  *(IV – slowly)* | ***Dose***: 1.1mg/kg | It has potent  anti-inflammatory and analgesic effects and is indicated for the treatment of acute and surgical pain. Flunixin is an exception among the NSAIDs as it relieves visceral pain and not only integument pain as most NSAIDs do. | Flunixin is not given rapidly via IV as some anaphylactic reactions have been observed. Treatment for longer than 3 days can result in hematochezia and hematuria. | Nicotinic acid derivative non-steroidal anti-inflammatory (NSAID) | Meat: 4 days  Milk: 72 hours |
| *Lidocaine (2%)*  *(Locally into spermatic cord and subcutaneous tissue dorsal to surgical site)* | ***Toxic Dose****:* 10mg/kg  ***Volume***= D x W / C  Calculate ½ your TD volume (mL) to see up to how many mL it is safe to give the drug | Lidocaine is a moderately long-acting local anaesthetic. It blocks initiation and transmission of nerve impulses at the site of application by stabilizing the neuronal membrane. | CNS signs, cardiac collapse, injection site necrosis | Class-1b antiarrhythmic drug | Meat/milk – 24 hours |
| *Penstrep – (IM)* | ***Dose***: 20,000 IU/kg | Streptomycin is used to treat and prevent Gram(-) infections.  Penicillin G is used in all species for the treatment of infections caused by Gram(+), nonpenicillinase producing pathogens. | Vestibulotoxic, nephrotoxic, neuromuscular blockade | Allergic reactions to penicillin may occur in animals, especially cattle | Meat – 30 days  Milk – 4 days |
| *Tolazoline 10% or 100 mg/mL*  *(in case of emergency for Xylazine reversal)*  *(IV)* | ***Dose***: 4x xylazine dose  E.g. = 4 x .05 = .2mg/kg  Vol: (250kg x .2mg/kg) / 100mg/mL  = .5 mL of Tolazoline to be given if needed | A direct peripheral vasodilator. It has direct actions on blood vessels; decreasing the pulmonary arterial pressure and peripheral resistance, and increasing venous capacity and cardiac output and can cause tachycardia, hypotension, and increased  GI motility | Tachycardia, peripheral vasodilation, hyperalgesia | Alpha 1 and 2 adrenergic competitive antagonist  (reversal agent) | Meat – 8 days  Milk – 2 days |
| *Tetanus Antitoxin*  *(SC/IM)* | ***Dose***: 1500 units – 1 5mL vial contains 1500 units | Neutralizes the toxin produced by Clostridium tetani before it is transported to the nervous system via the circulation. It can also neutralize toxin locally and prevent its systemic absorption. Thus, antitoxin can be given locally, at the site of toxin production, intravenously (in severe cases), and intramuscularly (in less severe cases) | Serum sickness  + Risk of anaphylactic reaction | Systemic passive immunizing agent. | Meat/Milk – 24 hours |