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| Drug | Concentration | Active ingredient | Indications | Precautions &Contraindications |
| 1. Ketamine | 10% | Ketamine hydrochloride. | Used for its analgesic properties, and it decreses the ‘wind up’ effect. | It should not be used alone for major surgery and should be used in combination with another drug eg Xylaine or Atropine  Ketamine can cause increases in CSF pressure and it should not be used in patients with high intra oculadr pressures or when head trauma has occurred. It should generally not be used in animals with preexisting seizure disorders without caution. It should not be used in procedures involving the pharynx, larynx or trachea. Ketamine can increase heart rate, increase blood pressure and should be avoided in patients where an increase in heart rate, blood pressure and myocardial oxygen consumption can be detrimental (eg. shock or congestive heart failure).  Adverse effects in cattle include hypersalivation, and pain after IM injection. |
| 1. Xylazine | 2% | Xylazine hydrochloride | Used as a sedative and analgesic.  Used as a pre anaesthetic before local or general anesthesia is given.  Can be combined with Lidocaine for a longer duration of anesthesia. | Contraindicated in animals receiving epinephrine or having active ventricular arrhythmias, hypotension, urinary tract obstructions, shock, and hepatic, cardiac and respiratory dysfunction.  It should not be given in the third trimester of pregnancy as it may induce immediate parturition.  Adverse effects in cattle include hypersalivation, blat, regurgitation, premature parturition and ataxia |
| 1. Lidocaine | 2% | Lidocaine hydrochloride | Local anesthetic eg. During epidurals, nerve blocks.  Can also be used as a Topical anesthetic.  Used to treat Ventricular arrhythmia | This drug should not be used with epinephrine intravenously.  It sould not be used in patients with hypersensitivity to amide class local anesthetics or with patients with AV, SA or intraventricular heart block.  Caution should be taken in patients with shock, respiratory depression, liver disease, congestive heart failure and hypovolemia. |