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| **Drug** | **Species** | **Indications** | **Therapeutic Dose** | **Contraindications** | **Pharmacology** | **Adverse Effects** |
| Thiopental/ Tiopental® 1g(Thiopental Sodium)E:\Dr. Diptee Introduction and Lab 1\las\Drugs\IMG_20180904_145731.jpg | Cattle, Horses, Sheep, Goats, Swine | Because of their rapid action and short duration, the thiobarbiturates are excellent induction agents for general anaesthesia with other anaesthetics or as the sole anaestheticagent for very short procedures. | Cattle:8.14 - 15.4 mg/kg IV;For unweaned calves from which food has been withheld for 6-12 hours: no more than 6.6 mg/kg IV for deep surgical anaesthesiaFor calves under 2 weeks of age: 15 - 22 mg/kg IV slowly until complete muscular relaxation takes place, duration of anaesthesia usually lasts 10-12 minutes. Horses: With preanesthetic tranquilization: 6 - 12 mg/kg IV (an average of 8.25 mg/kg is recommended); Without preanesthetic tranquilization: 8.8-15.4 mg/kg IV (an average horse: 9.9 - 11 mg/kg IV) One gram of thiopental per 90 kg body weight as a 10% solution given evenly over 20 seconds 15 minutes after premedication with either 0.22 mg/kg IV xylazine or 0.05 mg/kg IV acepromazine.  5.5 mg/kg IV after sedation and administration with guaifenesin; or 8.8 - 11 mg/kg IV after tranquilization. Swine: 5.5 - 11 mg/kg IV  For swine weighing 5 - 50 kg: 10 - 11 mg/kg IV Sheep:9.9 - 15 mg/kg IV depending on depth of anesthesia required Goats:a) 20 - 22 mg/kg IV after atropine (0.7 mg/kg) IM | Absence of suitable veins for IV administration, history ofhypersensitivity reactions to the barbiturates, and status asthmaticus. Relative contraindicationsinclude: severe cardiovascular disease or preexisting ventricular arrhythmias, shock, increased intracranial pressure, myasthenia gravis, asthma, and conditions where hypnotic effects may be prolonged (e.g., severe hepatic disease, myxedema, severe anemia, excessive premedication,etc). These relative contraindications do not preclude the use of thiopental, but dosage adjustments must be considered and the drug must be given slowly and cautiously.Thiopental readily crosses the placental barrier and should be used with caution during pregnancy.In horses, thiopental should not be used if the patient has preexisting leukopenia. Some clinicians feel that thiopental should not be used alone in the horse as it may cause excessive ataxia and excitement.Concentrations of less than 2% in sterile water should not be used as they may cause hemolysis.Extravasation and intra-arterial injections should be avoided because of the high alkalinity of thesolution. Severe CNS toxicity and tissue damage has resulted in horses receiving intra-carotid injections of thiobarbiturates. | Because of their high lipid solubility, thiobarbiturates rapidly enter the CNSand produce profound hypnosis and anesthesia. They are also known as ultrashort-actingbarbiturates.  | Horses can exhibit symptoms of excitement and severe ataxia during the recovery period if the drug is used alone. Horses also can develop transient leukopenias and hyperglycemia afteradministration. A period of apnea and moderate tachycardia and a mild respiratory acidosis may also develop after dosing.Too rapid IV administration can cause significant vascular dilatation and hypoglycemia.Repeated administration of thiopental is not advised as recovery times can become significantlyprolonged. Parasympathetic side effects (e.g., salivation, bradycardia) may be managed with theuse of anticholinergic agents (atropine, glycopyrrolate). |