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Standard Procedures for Anaesthetic and Analgesic Use

Anaesthetic Drugs/Cocktails

Mice and Rats

- Ketamine/Xylazine
- Ketamine/Medetomidine
- Pentobarbitone (Recommended for non-survival procedures only)
- Isoflurane (Can be used for induction and maintenance in rodents)

Reversal Agent

- Atipamezole (To reverse Xylazine or Medetomidine in rodents)

Analgesic Drugs

- Buprenorphine
- Meloxicam

Antibiotic Drug

- Enrofloxacin

Abbreviations:


IM- Intramuscular

IP- Intraperitoneal

IV- Intravenous

SC- Subcutaneous

PO- Oral

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Drug Dose Rates and Mode of Administration

Mice

ANAESTHETIC	DOSE RATE	ROUTE OF ADMINISTRATION
Ketamine	150mg/kg	IP
Xylazine	10mg/kg	
Ketamine	75mg/kg	IP
Medetomidine	1mg/kg	
Pentobarbitone	50mg/kg	IP
Isoflurane	<i>Induction: 3-5%</i>	Inhalation
	<i>Maintenance: 2-3%</i>	
Oxygen Gas	<i>Induction: 1-2L/min</i>	
	<i>Maintenance: 1-1.5L/min</i>	


REVERSAL AGENT	DOSE RATE	ROUTE OF ADMINISTRATION
Atipamezole	0.1-1mg/kg	SC

ANALGESIC	DOSE RATE	ROUTE OF ADMINISTRATION
Buprenorphine	0.05-0.1mg/kg	SC, every 12 hours
	0.1mg/kg (0.4ml per 100ml of water)	PO via drinking water
Meloxicam	1-2mg/kg	SC,PO every 24 hours

ANTIBIOTIC	DOSE RATE	ROUTE OF ADMINISTRATION
Enrofloxacin	5-20mg/kg	SC every 24 hours

Rats

ANAESTHETIC	DOSE RATE	ROUTE OF ADMINISTRATION
Ketamine	75mg/kg	Intraperitoneal
Xylazine	10mg/kg	
Ketamine	75mg/kg	Intraperitoneal
Medetomidine	0.5mg/kg	
Pentobarbitone	50mg/kg	Intraperitoneal
Isoflurane	<i>Induction: 3-5%</i>	Inhalation
	<i>Maintenance: 2-3%</i>	
Oxygen Gas	<i>Induction: 1-2L/min</i>	
	<i>Maintenance: 1-1.5L/min</i>	

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REVERSAL AGENT	DOSE RATE	ROUTE OF ADMINISTRATION
Atipamezole	0.1 to 1mg/kg	SC

ANALGESIC	DOSE RATE	ROUTE OF ADMINISTRATION
Buprenorphine	0.01-0.05mg/kg	SC, IV every 12 hours
	0.1mg/kg (0.4ml per 100ml of water)	PO via drinking water
Meloxicam	1-2mg/kg	SC, PO, IP every 24 hours

ANTIBIOTIC	DOSE RATE	ROUTE OF ADMINISTRATION
Enrofloxacin	5-10mg/kg	SC every 12 hours