

Drug Chart for Mastitis

$$\text{Volume (mL)} = (\text{dose (mg/kg)} \times \text{weight (kg)}) \div \text{concentration (mg/mL)}$$

Drug	Concentration (mg/ml)	Dose (mg/kg)	Example Calculation (Goat weighing 50kg)	Route of Administration	Indication	Contraindications	Withdrawal Time
Lidocaine hydrochloride (Local anesthetic)	20mg/ ml (2%)	2mg/kg	$(2\text{mg/kg} \times 50\text{kg}) / 20\text{mg/ml} = 5\text{ml}$	IV, SC, Epidural, Topical	<ul style="list-style-type: none"> • 100% nerve block. • Short acting local anesthetic. • Effective for 45 to 90 minutes 	<ul style="list-style-type: none"> • Use with caution in animals that are pregnant and those with cardiac or hepatic impairment 	Meat - 1 day Milk - 24 hours
Ketamine (Induction agent)	50mg/ml	2mg/kg	$(2\text{mg/kg} \times 50\text{kg}) / 50\text{mg/ml} = 2\text{ml}$	IM, IV	<ul style="list-style-type: none"> • Local or regional anesthesia 	<ul style="list-style-type: none"> • Increased heart rate, cardiac output and blood pressure 	Meat - 3 days Milk - 24 hours

Combination drugs that are used:

- ❖ Anesthetic drugs.
 - An anesthetic drug blocks all sensation, so the animal feels no pain.
 - There is local and general anesthetics.
 - Anaesthetics should be injected 5 to 20 minutes before the onset of castration surgery. This gives the drug time to take effect and the animal feels no pain or discomfort during the surgery.
 - Postoperative pain management for several hours is achieved with this.
 - Eg. Lidocaine

- ❖ Analgesic drugs.
 - An analgesic drug eliminates pain temporarily but other sensations are still felt.
 - Should be given before the surgery
 - Lasts longer than anesthetics and gives pain relief for roughly 4 days after the surgery
 - Eg. NSAISs such as Meloxicam

- ❖ Therefore a combination of both anaesthesia and analgesia allows for the best form of pain management intra and postoperatively. The following are some combinations:
 - Lidocaine + Flunixin meglumine
 - For analgesia

 - IV Xylazine + Ketamine
 - For sedation.
 - This reduces stress and serum cortisol concentrations after surgery
 - Dose IM: Ketamine: 11 mg/kg + Xylazine: 0.20 mg/kg

- Meloxicam (NSAID) + Local anesthetic
 - For pain mitigation and stress

References

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