

Bovine Teat and Udder Surgery

Drugs and Anaesthesia

DRUG	DOSE	ROUTE	DOSE CALCULATION	CONTRA-INDICATION	WITHDRAWAL TIME
Xylazine 2%	0.025 – 0.05 mg/kg	IM	$\frac{0.025 \times \text{weight (kg)}}{20}$	<p>Animals: Receiving epinephrine Having ventricular arrhythmia. Oesophageal obstruction Calves < 2 weeks old</p> <p>Should be used with caution in animals with cardiac dysfunction, hepatic or renal problems.</p>	Meat – 2 days Milk – 1 day
Ketamine 10%	2 mg/kg	IM	$\frac{2 \times \text{weight (kg)}}{100}$	<p>Its use is contraindicated in chronic renal disease. It may have a role in "resetting" of the central nervous system in maladaptive pain states.</p>	Meat-3days
Flunixin Meglumine	1.1 mg/kg	IV	$\frac{1.1 \times \text{weight (kg)}}{50}$	<p>In cattle, the drug is contraindicated in animals that have shown prior hypersensitivity reactions. The IM route is extra-label in cattle and should only be used when the IV route is not feasible for use. Longer withdrawal times would be required after IM use. Flunixin should not be used in an attempt to ambulate cattle to be shipped for slaughter. Not for use in lactating or dry dairy cows.</p>	Meat – 4 days Milk – 36 hrs
Penicillin Streptomycin	20,000 IU/kg	IM	$\frac{20,000 \times \text{weight (kg)}}{200,000}$	Hypersensitivity to Penicillins.	Meat – 30 days

DRUG	DOSE	ROUTE	DOSE CALCULATION	CONTRA-INDICATION	WITHDRAWAL TIME
Lidocaine	1-2 ml at each site	SQ	<p>Toxic dose of lidocaine = 10 mg/kg</p> <p>\therefore Toxic Volume = $\frac{10 \times \text{weight (kg)}}{20}$</p>	<p>Should be used with caution in patients with liver disease, congestive heart failure, hypovolemia and severe respiratory depression.</p> <p>Do not use with epinephrine as it may cause sloughing off of the extremities.</p>	<p>Milk – 24 hrs</p> <p>Meat – 24 hrs</p>
EMERGENCY DRUGS					
Atropine	0.04 mg/kg	IM	$\frac{0.04 \times \text{weight (kg)}}{1}$	<p>Atropine is contraindicated in patients with narrow-angle glaucoma, adhesions between the iris and lens, hypersensitivity to anticholinergic drugs, tachycardia secondary to thyrotoxicosis or cardiac insufficiency, myocardial ischemia, unstable cardiac status during acute haemorrhage, GI obstructive disease, paralytic ileus, severe ulcerative colitis, obstructive uropathy, and myasthenia gravis (unless used to reverse adverse muscarinic effects secondary to therapy).</p>	<p>Meat – 28 days</p> <p>Milk – 6 days</p>
Tolazoline	2-4 times dose of xylazine	Slow IV		<p>Tolazoline should be considered contraindicated in patients known to be hypersensitive to it, or with coronary artery or cerebrovascular disease.</p> <p>NOTE: Tolazoline is not approved in the USA for use in food animals.</p>	30 days

Epinephrine	0.02 mg/kg	IM	$\frac{0.02 \times \text{weight (kg)}}{1}$	<p>Epinephrine is contraindicated in patients with narrow-angle glaucoma, hypersensitivity to epinephrine, shock due to non-anaphylactoid causes, during general anaesthesia with halogenated hydrocarbons or cyclopropane, during labour (may delay the second stage), and cardiac dilatation or coronary insufficiency. It should not be injected with local anaesthetics into small appendages of the body (<i>e.g.</i>, toes, ears, etc.) because of the chance of necrosis and sloughing.</p> <p>Use epinephrine with caution in cases of hypovolemia; it is not a substitute for adequate fluid replacement therapy.</p>	N/A
-------------	---------------	----	--	--	-----