**DRUG CALCULATIONS**

*Weight of animal = 500kg*

*Volume of drug used (ml) = (Dose (mg/kg) × weight of animal (kg)) / concentration (mg/ml)*

1. Xylazine (2%)

Volume (ml) = (Dose (mg/kg) × weight of animal (kg)) / concentration (mg/ml)

= (0.05 mg/kg × 500kg) / 20 mg/ml

=1.25 ml ≈ 1.3 ml

1. Lidocaine (2%)

Volume (ml) = (Dose (mg/kg) × weight of animal (kg)) / concentration (mg/ml)

= (0.2 mg/kg × 500 kg) / 20 mg/ml

= 5ml

Toxic dose of Lidocaine = 10mg/kg

Maximum dose of Lidocaine /animal (for safety) = ½ (toxic dose)

= ½ (10mg/kg)

= 5mg/kg

Volume of Lidocaine considered safe for use in this animal (ml) = (Dose (mg/kg) × weight of animal (kg)) / concentration (mg/ml)

= (5mg/kg × 500 kg) / 20 mg/ml

= 125 ml

* The volume of lidocaine for a proximal paravertebral block to perform an enterotomy on this animal is **30 ml** (10ml/site).

This is well below 125 ml which is considered the safe volume for use in this animal.

* The volume of lidocaine used for a caudal epidural block to repair a rectal prolapse on this animal is **5ml**.

This is well below 125 ml which is considered the safe volume for use in this animal.

EMERGENCY DRUGS

1. Tolazoline

Dose = 2× (dose of Xylazine)

= 2 (0.05 mg/kg)

= 0.1 mg/kg

Volume of Tolazoline (ml) = (Dose (mg/kg) × weight of animal (kg)) / concentration (mg/ml)

= (0.1 mg/kg × 500 kg) / 100 mg/ml

= 0.5 ml

1. Atropine

Dose = 0.04 mg/kg

Concentration = 0.54 mg/ml

Volume (ml) = (Dose (mg/kg) × weight of animal (kg)) / concentration (mg/ml)

= (0.04 mg/kg × 500 kg)/ 0.54 mg/ml

= 37.037 ml ≈ 37 ml

1. Epinephrine

Dose = 0.02 mg/kg

Concentration = 1mg/ml

Volume (ml) = (Dose (mg/kg) × weight of animal (kg)) / concentration (mg/ml)

= (0.02 mg/kg × 500 kg) / 1 mg/ml

= 10 ml