Drug Calculations

2% *Xylazine*

- Dose: 0.025 mg/Kg
- Concentration: 20 mg/mL
- Weight of Calf #223: 130 Kg

$$Volume = \frac{Weight \times Dose}{Concentration}$$

$$Volume = \frac{130\ Kg \times 0.025\ mg/Kg}{20\ mg/mL}$$

$$Volume = 0.16\ mL$$

10% *Ketamine*

- Dose: 0.5 mg/Kg
- Concentration: 100 mg/mL
- Weight of Calf #223: 130 Kg

$$Volume = \frac{Weight \times Dose}{Concentration}$$

$$Volume = \frac{130\ Kg \times 0.5\ mg/Kg}{100\ mg/mL}$$

$$Volume = 0.65\ mL$$

Combikel

- Dose: 10,000 IU/Kg
- Concentration: 200,000 IU/mL
- Weight of Calf #223: 130 Kg

$$Volume = \frac{Weight \times Dose}{Concentration}$$

$$Volume = \frac{130\ Kg \times 10{,}000\ IU/Kg}{200{,}000\ IU/mL}$$

$$Volume = 6.5\ mL$$

5% *Flunixin*

- Dose: 1.1 mg/Kg
- Concentration: 50 mg/mL
- Weight of Calf #223: 130 Kg

$$Volume = \frac{Weight \times Dose}{Concentration}$$

$$Volume = \frac{130\ Kg \times 1.1\ mg/Kg}{50\ mg/mL}$$

$$Volume = 2.86\ mL$$

2% *Lidocaine*

- Dose: 2 mg/Kg
- Concentration: 20 mg/mL
- Weight of Calf #223: 130 Kg

$$Volume = \frac{Weight \times Dose}{Concentration}$$

$$Volume = \frac{130\ Kg \times 2\ mg/Kg}{20\ mg/mL}$$

$$Volume = 13\ mL$$

NB: For simplicity, **14 mL** of Lidocaine was used. This was divide into 2 giving *7 mLs of Lidocaine per site*

Toxic Dose of 2% Lidocaine

- Dose: 10 mg/Kg
- Concentration: 20 mg/mL
- Weight of Calf #223: 130 Kg

NB: ½ Toxic Dose was used

$$Volume = \frac{Weight \times Dose}{Concentration}$$

$$Volume = \frac{130\ Kg \times 5\ mg/Kg}{20\ mg/mL}$$

$$Volume = 32.5\ mL$$

$$\therefore Do\ \boldsymbol{NOT}\ exceed\ 32.5\ mLs\ of\ Lidocaine$$

Drug Calculations

Emergency Drugs

Tolazonine (2-4 x Xylazine Conc. Rate)

- Dose: (0.025 x 2) = 0.05 mg/Kg
- Concentration: 100 mg/mL
- Weight of Calf #223: 130 Kg

$$Volume = \frac{Weight \times Dose}{Concentration}$$

$$Volume = \frac{130\ Kg \times 0.05\ mg/Kg}{100\ mg/mL}$$

$$Volume = 0.065\ mL$$

Atropine

- Dose: 0.04 mg/Kg
- Concentration: 0.54 mg/mL
- Weight of Calf #223: 130 Kg

$$Volume = \frac{Weight \times Dose}{Concentration}$$

$$Volume = \frac{130\ Kg \times 0.04\ mg/Kg}{0.54\ mg/mL}$$

$$Volume = 9.6\ mL$$

Epinephrine

- Dose: 0.02 mg/Kg
- Concentration: 1 mg/mL
- Weight of Calf #223: 130 Kg

$$Volume = \frac{Weight \times Dose}{Concentration}$$

$$Volume = \frac{130\ Kg \times 0.02\ mg/Kg}{1\ mg/mL}$$

$$Volume = 2.6\ mL$$

NB: ***The 3 emergency drugs listed were not used during this procedure.***