The Triple Drip as an Anesthetic in Cattle

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General anesthesia is not usually a requirement when performing many procedures in the bovine, but it can be a useful tool when complete restraint is required. Triple Drip anesthesia is simple, uses no schedule drugs, is relatively safe and provides adequate levels of analgesia to facilitate any procedure. Personnel administering the triple drip should be experienced both in administering anesthetics and in patient monitoring techniques.

The Triple Drip anesthetic protocol has been used in many equine practices over the years. It is most often used for procedures requiring one hour or less. The ingredients for the "cocktail" are: 5% quaifenesin solution (made with 5% dextrose in sterile water), xylazine, and ketamine. Dosages of both xylazine and ketamine vary according to the weight and disposition of the animal. A 1000 pound animal is usually given a combination of 100mg of xylazine and one gram of ketamine in a liter of 5% quaifenesin. Cattle greater than 1000 pounds are given 200mg of xylazine and two grams of ketamine in one liter.

The animal is restrained in lateral recumbency and sedated with xylazine. The xylazine is dosed at 10mg per 100 pounds up to 500 pounds, over 500 pounds increase with 5mg per 100 pounds body weight above 500 pounds. No other preanesthetics are utilized. Often after sedation occurs the animal can be intubated. Those animals that do not easily allow intubation after sedation are subjected to anesthesia before intubation is attempted a second time. This is accomplished by placing an intravenous catheter and administering a bolus dose of the Triple Drip solution to effect. When adequate relaxation is achieved, a maintenance drip is established at approximately five milliliters per minute. At this time the animal should be monitored closely as some do develop a respiratory apnea. Evidence of decreased respiratory effort should be addressed by decreasing the volume of anesthetic administered and supplementing with a low flow of oxygen into the endotracheal tube. The apnea is usually transitory in nature and will subside within five to ten minutes. Proper attention should be paid to positioning of the animal as well as ample supportive padding in order to aid in prevention of postoperative myositis.

Anesthetic reversal is accomplished by the use of tolazoline HCl given intravenously at 100mg per 500 pounds body weight. If complete reversal is not achieved within five to ten minutes a second dose may be administered.

This anesthetic protocol has been used successfully in cattle for the past fifteen years with no adverse reactions. Technicians become quite comfortable with the Triple Drip procedure after limited experience.

Physics in Veterinary Practice – Loading Cadavers

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Physics was a very difficult subject in my preveterinary curriculum. It almost kept me from getting into veterinary school. I wondered why we were required to have physics courses. Was it to keep the applicant pool narrowed down? Later I thought it might be to help us understand the principles of radiology. I sure don't understand how radiographs work. I barely have enough imagination to see the fracture that I knew was there before I shot the picture.

It was years later that I realized that physics play a large role in bovine practice. What is the principle of the calf jack? It has a lever and fulcrum, and when