Intravenous Catheterization for the Administration of Large Volumes of Fluid

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Many intravenous catheters have a slow delivery rate, are difficult to hook up or become disconnected or kinked off if the cow starts to move around. To overcome some of these problems, a non-conventional catheterization system was improvised using a Ral-gun needle, a urethral catheter (Sovereign, Monojet, trademark, 8 French size) and a strip of rubber cut from an old inner tube.

The Ral-gun needle is used to make the venapuncture and then the catheter is passed through the needle into the lumen of the vein. Usually one half of the length of the catheter is passed into the vein. The Ral-gun needle is withdrawn from the vein and left attached to the catheter outside the vein. The catheter itself is connected to a regular intravenous tube set or a Willougby apparatus set. This connection or hook-up is facilitated by an intravenous tube connector that is inserted into a notch in a one inch rubber strap cut from an old inner tube. The strap with the catheter connected to it is passed around the cow's neck and tied. No sutures are required except if the cow struggles excessively one or two sutures are used to anchor the rubber strap to the cow's neck and prevent it from slipping anteriorly or posteriorly along the cow's neck.

Some individuals may experience technical difficulty in inserting a Ral-gun needle into the vein. To overcome this problem you can use a 14 gauge 1½" or 2" needle inserted through the lumen of the Ral-gun needle to serve as a trochar which is withdrawn when the Ral-gun needle is in the lumen of the vein.

Illustration of the intravenous procedure.

Indwelling Bloat Relief Instrument

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The indwelling bloat relief instrument, nicknamed "bloat whistle" is intended for use in chronic bloat of ruminants. The instrument is made of a neutral plastic material so no tissue reaction is encountered. The instrument is designed so that the lumen is sufficient size to prevent ruminal contents from clogging the opening. A ¾" bovine cannula can be inserted through the lumen and frothy material evacuated from the rumen by a pumping-siphoning action. Bloat medicines can be administered directly through the lumen of the instrument.

With the animal standing and using a tight tail press the animal is clipped and local anesthesia is given in the left lumbar area. A 1¾" incision is made through skin, muscle and peritoneum of the left paralumbar fossa. The rumen is entered next with the same length incision. One of the cut edges of the rumen must be grasped by the fingers or forceps. Through this opening one half of the bloat instrument is inserted tongue first, followed by entry of the second half in a similar manner. The two halves will fit together properly by the male/female connection. The 4" plastic circle with collar will slide over the cylinder of the bloat instrument thereby holding it together. On the edges of the plastic ring