

A SIMPLE RAPID METHOD OF RUMEN CANNULATION

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Rumen cannulae are often used in the study of nutritional physiology of ruminants. Previous methods of cannulation have involved two stage operations (Jarrett 1948, Hecker 1969) and have been found to be both time consuming and somewhat traumatic to the animal. In addition, the need for a relatively large incision in the rumen wall means that leakage of rumen contents around the cannula is a frequent problem.

Described here is a simple one-stage operation for sheep, requiring no suturing of the rumen wall, using an incision smaller than the neck of the cannula, which ensures no leakage of rumen contents.

Under surgical anaesthesia a vertical incision about 5cm long is started on the left side about 3cm posterior to the last rib and 3cm ventral to the transverse process of the first lumbar vertebra. The rumen is withdrawn and a small incision (<2cm) is made in a section free of any major blood vessels.

A rubber mushroom type cannula (Starr Rubber Co., N. Plymton, S.A.) is partially everted by pushing the flange through the neck of the cannula. The folded cannula is then inserted through the incision and pushed inwardly until the neck of the cannula is tightly held by the tissue surrounding the incision. The cannula flange is then reverted to its initial shape.

The abdominal muscles and the skin are sutured closed. A PVC plate is placed over the cannula neck and a cut-off 20ml syringe barrel and rubber stopper are held in the cannula neck with a cable tie. Two holes may be bored into the flanges of the syringe and wire tied over the stopper to eliminate the possibility of the stopper becoming dislodged. A topical antibiotic and intramuscular procaine penicillin as prophylactic measures are advised.

After several days adhesions form between the rumen wall and the peritoneum. No peritonitis has been observed.

To date this method has been used on 52 sheep for up to three years with excellent results. Occasional removal of the PVC plate and clipping of the wool is recommended to reduce tightness and the possibility of blowfly attack.

The operation can be completed in less than 20 minutes and the majority of animals eat their normal ration once the effects of anaesthesia have dissipated

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