Ross cattle are primarily fed guinea grass with occasional brewer's grains. The average number of protozoa seen a 40X power was 3 and the average maximum seen was 4. No externally obvious hematomas or other swellings were seen during the ~3 week follow-up and no other complications were noted. Possible pathological lesions based on ultrasonographic follow-up were noted for 11 of the 58 head (19%). None of the possible pathological lesions developed into abscesses. The average length of time required to obtain the rumen sample, measured by introduction of the needle to withdraw of the needle was 3 seconds (range <1 second to 8 seconds).

Significance

We conclude that the paralumbar fossa trans-abdominal ruminal fluid sampling technique is a safe and efficient means of obtaining rumen fluid in cattle with a moderately thin body wall.

A new endoscopic approach for bronchoalveolar lavage compared with traditional trans tracheal lavage for BRD diagnostics

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Introduction

Bronchoalveolar lavage (BAL) is a very common and useful diagnostic approach for bovine respiratory disease (BRD) management. Traditionally the lavage is carried out through the trachea (trans-tracheal lavage – TAL). A new hand held multiscope (endoscope with several different functions; ivetscope) has been designed for a more convenient way of BAL under field conditions. The aim of this study was to compare 2 different methods of alveolar lung lavage – the puncture of the trachea with the transtracheal lavage against the oral-laryngeal method.

Materials and Methods

The new endoscope approach was used on 64 calves (age 2 to 22 weeks) with BRD history. Bronchoalveolar liquid was sampled and send to the microbial and virological laboratory for identification of the causative agent. Thirty-two (32) calves were collected the traditional way (TAL) and 32 calves were examined by the use of the endoscopic (BAL) method. This endoscope is a pistol-shaped, hand-held, cordless endoscope, 40 cm in length, with 2 working tunnels. A camera is positioned next to the corpus, so that a visual adspection can be carried out simultaneously. Calves were sedated (xylazine, 0.5 mg/lb (1.1 mg/kg)), restrained in sterno-ventral position with the head fixed by the farmer. Each time, 2 samples of broncho-alveolar liquid were collected from the far distal part of the lung (>50 cm distance) and from the upper part of the bronchus (30-40 cm). They were split equally into a modified New York City medium (NYC medium, Biocheck) and a sterile vessel.

Results

Overall in a total of 15.4% of all cases No agent could be identified in 15.4% of cases. The traditional TAL had 25% "no agents" isolated while the new BAL method had "no agents" isolated in 6.1% (4 times less; $p<0.01$). *M. bovis* was found 3 times more often (33.3% vs 9.4%) with the endoscope lavage (BAL). *P. multocida* was the most single prominent bacteria to be found in the lung, in 9.2% of total. 15.6% of all cases with monocausal cases were diagnosed with *P. multocida* by TAL, whereas BAL revealed *P. multocida/M. bovis* 5 times more often.

Significance

This endoscopic diagnostic instrument reduced the number of negative results by a factor 4 compared to the traditional approach. This technique dramatically improved the diagnosis of *M. bovis* by a factor of 3 and increased the diagnosis of combined infections with *P. multocida* and *M. bovis*. The BAL techniques using the instrument provided a better on-site diagnostic rate than the traditional TAL method.