

Practice Tips

Dr. Robert J. Harris, Chairman



Bovine GI Tract

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We'll just have four quickies that deal directly or indirectly with diagnosis and treatment, and that treatment may not pertain essentially to gastrointestinal diseases.

The *first* one is to maintain supplies of stock solutions on the farm, in the calf barns, for the oral administration of anti-diarrhea fluids. Essentially, this is nothing more than a five gallon or larger capacity carboy. You make up a stock solution to keep directly in the calf barn, various formulations for the stock solutions can be synthesized. However, the one thing I want to caution you about is the stock solution. Do not include a glucose or a dextrose source until after the solution has been moved from your container. If maintained in the carboys for a prolonged period of time it generally gets some bacterial or fungal growth. (Dr. Troutt had a slide demonstration of a five gallon bottle aspirator.) This was a carboy with a spigot and the farmer or the herdsman then can move various quantities of the materials readily from the carboy into the calf bucket or into a vehicle for oral administration. Such a container is obtained from Fisher Scientific Co. and other scientific companies also carry these. The catalog number on Fisher is 29636B; 6B refers to the large type or the five gallon size. The approximate cost is \$20.00 each.

Another practice tip which I owe to Drs. Paul Hoffman and Ed Staff from the Equine Clinic, University of Georgia, is a stomach pump that delivers a little greater capacity and has a broader scope than some of the short ones we are familiar with. This is nothing more than a modified bilge

pump that is obtainable from any marina supply house or boating supply house. The cost of one of these is really quite nominal, about \$6-8, and you have a very nice delivery system. The modification is in the spigot or the exit portion. The pump comes equipped with a gasket that has a hole in the center of it. Remove it and take it to a machine shop and have an extruded gasket made for yourself. Tape this into place with a tension clamp. This type of stomach pump can very readily pump a large volume of fluids into the rumen.

The *third* practice tip is useful, especially in large herds, where we may miss gastrointestinal disease for two, three, or four days because the "picky" cow has not been picked out. The gastrointestinal disease may present a clinical sign that involves ketonuria. For this I use a self-manufactured keton kit. I use nitroprusside powder obtained from Nasco and I put these together in cigar boxes. The little squares of paper are nothing more than filter discs cut about an inch square. I try to train the helpers to check the fresh cows coming through the line perhaps as frequently as every other day during the first two to three weeks to see if we can pick up these ketonic cows early.

The *fourth* practice tip has to do directly with the diagnosis of digestive disturbances, especially those that have to do with ruminal pH fluctuations. It also serves as an indicator for what I believe is logical therapy—determination of ruminal pH. This is done quite simply with a pH paper and a wellpipe and then a stomach tube sample of

ruminal juice which can be very rapidly obtained and checked for pH. The paper that I use is manufactured or sold through Scientific Products and is a wide range pH paper. The pH variation is 4-9. This would involve most of the hyperacidity conditions as well as alkaline conditions. I think the use of pH paper permits you to make a logical judgment as to what type of therapeutic agent

you're going to put in the rumen. When you consider the packaged products available to us, almost all of them are alkalizing agents. Now, in some simple indigestion problems they may be contraindicated; so if you will check the ruminal pH—it will not take you long—and it will serve you and your client well.

Amputation of Prolapsed Cervical Rings

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The cow's cervix is normally two to four inches in length and three-fourths to two and three fourths in diameter. The cervix in a heifer may be smaller than the minimum size given for cows. As a cow increases in the number of parturitions and in age, the size of her cervix usually increases. The size of the cervix in aged cows may exceed the dimensions listed, especially in regard to diameter.

The cervix is part of the tubular genitalia and forms the connection between the vagina and uterus. Internally, the cervix is a potential canal which is effectively closed by partially interdigitating, muscular, fibrous, transverse annular rings which have a cartilaginous consistency.

The external os of the cervix is normally flush with the fornix of the vagina and does not protrude into the lumen of the vagina. When the normal cervix is viewed through a vaginal speculum, it appears as a slightly thickened extension of the vaginal wall with a central opening, pale pink in color, in the anterior fornix of the vagina.

On rectal palpation the cervix is identified by its firm rope-like consistency of the dimensions described.

Occasionally the cervix is identified as being abnormal when palpated rectally. One of the abnormal conditions of the cervix which can be identified is prolapse of the transverse annular rings through the external os into the lumen of the vagina. This condition is identified by its "door-knob"-like structure. The external os of the cervix will be enlarged two to three times the diameter of

the body of the cervix. In some extreme cases the enlargement may be greater.

When viewed through a vaginal speculum, the cervix with prolapsed rings appears enlarged and greatly thickened. The opening is dilated with folds of tissue protruding through it. Not always, but usually, petechial hemorrhages can be seen on the prolapsed rings. One should be aware that vigorous palpation or attempts to pass an insemination rod may cause this evidence of inflammation.

We think that prolapsed rings occur subsequent to trauma at the time of parturition. It may represent a site of chronic infection which may or may not be due to the trauma of calving. We also think that injudicious attempts to dilate the cervix and remove retained fetal membranes can result in chronic cervicitis and prolapsed cervical rings.

When we identify prolapsed cervical rings on a postpartum exam, we are usually not concerned with immediate therapy or surgery. Most mild or moderate cases will correct with time. Many cases diagnosed at 30 days postpartum will not be found at sixty to ninety days postpartum. In addition, many cows will conceive and experience normal gestation in spite of the presence of prolapsed cervical rings at the time of breeding.

There are, in general, two situations when we will attempt to correct this condition. If we feel that the condition is severe when found on postpartum examination, we treat the condition medically with infusions of antiseptic solutions into the cervix and vagina. If the condition does not respond and the cow does not conceive after