

Panel Discussion

Dr. Larry Jones
Dr. Wade Kadel
Dr. Herschel Giles

Questions Addressed to Larry Jones

Question—How do you preserve the cerebral spinal fluid with the ethyl alcohol?

Answer—I don't know whether it's the same as the one discussed yesterday in the Academy of Veterinary Consultants, but if you take a couple of ccs of cerebral spinal fluid and a couple of cc's of 40-45% ethyl alcohol and just mix them together, that will preserve the cell types good enough. Do not do this for the stuff you expect an isolation from. One of the problems with cerebral spinal fluid is that it is quite fragile. You cannot take cerebral spinal fluid from a dead animal and run glucose on it. Nor can you accurately check for protein by the Pandy test. This has to be done on a live animal and done fairly readily. But we've been playing with using cerebral spinal fluid as a possibility to check for hypomagnesemia because so many times the tissues are so decomposed and the serum is too bad to check.

Question—I'd like to know what tissues should be presented to the lab under ideal conditions for a diagnosis of hypomagnesium?

Answer—We like serum and that would preferably be before you treated the animal. If it's a dead animal, we would like urine and the eye. A lot of times we can pin it down for you then.

Modulator: Excuse me, that was a Georgia veterinarian, so I feel a right to expand on Dr. Jones' remarks. We encourage also that serum samples be submitted in chemically cleaned tubes. These bang tubes that are so available to practitioners are inappropriate for most serologic tests. They are the cause of toxic reactions in serum virus neutralization tests and virologic tests, but definitely chemical tests. From our lab we send a list of supplies that enable veterinarians to buy whatever they might need but can't get elsewhere. Some agencies use phosphate extensively in washing brucella tubes and so that a lot of times on calcium-phosphorus examinations on serum from brucella tubes, the phosphorus levels are out of sight. It is because of the residual phosphorus.

Question—While we're on the eye, you mentioned nitrate; what level do you call positive for nitrate?

Answer—Dallas, we don't quantitate it. We use that little spot test reagent method that was developed by Halsholder and Delihide. If that test becomes positive instantaneously upon addition of the two drops to the two drops of ocular fluid, we call it nitrate intoxication. As far as quantitation goes, you run into some problems there on the fluid in the eye.

Questions Addressed to Herschel Giles

Question—You mentioned that edema in the folds of the abomasum was typical as a lesion of edema in the bovine; is that also true for other edema in dairy cattle?

Answer—No, udder edema in dairy cattle would be a localized problem. I am referring to generalized anasarca.

Question—On the slide that you demonstrated the acute hemolytic anemia, looking at the liver individually, how would you distinguish this from leptospirosis and on the slide on focal necrosis in the liver, could you distinguish this from a sawdust liver and from central lobular necrosis?

Answer—I'll take the second one first. The slide illustrating focal liver necrosis is synonymous in my opinion with what they refer to as sawdust liver. I could not distinguish them. In terms of how do I distinguish it from central lobular liver necrosis, the pattern with focal liver necrosis will be at random, whereas with central lobular liver necrosis the center of every individual lobular should be affected. The first question dealing with the color of the liver with acute hemolytic anemia, I would not try to do it simply on the liver by itself. I would look at the rest of the animal to make sure that it was anemic or had other lesions suggestive of leptospirosis or an infectious disease with hemorrhages.

Question—In our area we are being faced with some people who are recycling chicken litter. On post-mortem we very often see ulcerations in the rumen that do not appear to have anything to do with the respiratory condition that the animal may have died from. Is this constant with the findings now of recycling litter?

Answer—I don't know.

Question—In our area we are now faced with farmers who are running short on forages and are using chicken litter together with corn to supplement their diets. On routine post-mortems it is obvious that the animals have died from conditions other than a digestive disorder. We find a large percentage of rumen ulcers. Is this finding constant, or is this finding going to be something we will see with recycled chicken litter?

Dr. Jones: Whether or not it is a commonly associated thing with chicken manure, I don't know. But I think it is with concentrated feeds and maybe it is something that we all take in stride as we begin to push cattle. We see quite a bit of rumen ulcers on feedlot animals anyway. Usually they are sort of incidental to maybe the primary problem, but they do occur. I think you're just going to have to accept them and if they seem to be extensive and in the absence of anything else, that is a primary diagnosis, or a principal problem for that individual. Whether or not they are going to be commonly associated with chicken manure, I could not say. I don't know if we've had a long enough experience with feeding chicken manure to know. Chicken manure and chicken litter are different.

Another speaker: If it is pine shaving litter and they are coarse, you have an abrasive there along with the increased amount, and if you don't balance those things out, you are putting a lot of urea into those cattle from the chicken feces. In essence you are creating a feedlot situation. With pine shavings I have noticed that they will consistently have rumen ulcers. With straw or some of the softer type shavings that are finely ground, they have not been having some of the problems. This is some of the current thoughts that I've heard on this.

Question—You described that pigment in the liver and you said flukes; were you referring to the deer fluke or *fasciola hepatica*?

Answer—Liver fluke. In *fascioloides* there is a tremendous deposition of black pigment. Gulf Coast cattle coming out of Texas in which the deer fluke, *fasciola magna*, is a parasite on post-mortem show the abdominal cavity full of “coal dust.” This pigment is derived from the blood pigment that goes through the various digestive enzymes.



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