

Cow-Calf Section

A Practical Approach to the Diagnosis and Treatment of Trichomoniasis

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Bovine venereal trichomoniasis is caused by the protozoan parasite, *Trichomonas foetus*. It has been well documented that the disease is venereal in nature, and that it interferes with the reproductive ability of the bovine female. Because the parasite is much easier to demonstrate from the bull, diagnosis of the disease in a given herd is usually done on the bull.

Field diagnosis is fairly easily accomplished by collecting prepuccial samples by one of two methods. The douche technique is one where 100 cc to 150 cc of warm saline is instilled into the prepuccial cavity and then retrieved for examination. Before retrieving the saline, the prepuccial orifice is held closed and the prepuce is massaged vigorously. After the retrieval, the sample is allowed to settle for about thirty minutes and the bottom 15 cc of sediment is centrifuged. A small amount is removed from the bottom of the tube and examined at low power under subdued light for the presence of motile protozoa. Several slides should be examined before calling the sample negative. Although this technique is very effective, it has two distinct disadvantages: the warm saline in the prepuccial cavity often stimulates urination, and a centrifuge is not always available under field conditions.

An alternative method is the collection of a prepuccial sample using an uterine infusion tube. This is accomplished by inserting the tube to the fornix area and with slight negative pressure, applied with an attached syringe, the end of the tube is moved back and forth. The sample is flushed into a tube containing 2 cc of saline solution. Small amounts are removed and slides prepared for examination. A small amount may also be removed and inoculated into culture media.

I first became interested in using the drug dimetridazole

for the treatment of trichomoniasis in 1963, after reading about some work done at Beltsville by McLaughlin. At that time, I was trying to clean up several Charolais herds which were badly infected with trichomoniasis. Each of the herds had several valuable bulls, which we were having less than satisfactory results with, using various standard treatments. It was not until early 1964 that we were able to obtain dimetridazole for experimental use on these bulls.

The first group of bulls, sixteen in number, were treated shortly thereafter, and we made a concerted effort to follow through on them to see how effective the treatment had been. The sixteen bulls were tested a total of one hundred sixty-three times, by the douche method. Five of them were cultured three times each, and three of them were test-mated to a group of heifers. All tests were negative and most of the bulls remained in active service for several years.

Within a two year period, we treated over one hundred bulls. Unfortunately, we were not able to follow through on some of them. I am sure that you can understand some of the problems involved in getting an owner to present bulls for constant testing, especially after it appeared that they were clean. All of the bulls were tested at least one time, however, and most of them were tested several times. All tests were negative.

The results on these bulls were so gratifying that I started thinking along the lines of treating the cow herd, as well as the bulls. This appears to be the logical procedure. The reasons, I am sure, are very obvious. I had an ideal situation for field testing in 1964. A client had twenty known recently infected heifers and the two bulls which had infected them. He agreed to let me use the animals in a field test. I had planned to treat the bulls and heifers, then follow through with a thorough testing program, leaving the bulls and the

heifers together all the while.

At the last minute, we were descended upon by a representative of the FDA and had to halt the test. By the time we were able to convince the FDA that none of the animals would be used for milk production, or sold to slaughter, we did not have the ideal situation any longer, for the heifers had been given sexual rest and we could not be certain that they were still infected at the time of treatment. We later treated these heifers and several others, in all stages of lactation and gestation. I do not think that we proved a great deal, because these cows could possibly have been clean when treated.

I have treated enough bulls to be convinced that dimetridazole systemically is an effective treatment for trichomoniasis in bulls. It is logical to assume that it would be just as effective in the cow. It is my opinion that by treating bulls and cows both, and culling out the pyometras that might be present, a herd can be freed of trichomoniasis in a very few days.

To date, we have used only one mode of treatment using dimetridazole. It consists of giving an oral dose of 25 mg per pound of body weight daily for five days. This may or may

not be the optimum dosage level. It just happens to be the level we originally used and have not seen fit to alter it.

Because dimetridazole is not available for use in the bovine animal, some veterinarians have used a product labelled for use on turkeys to treat bulls. How extensive this procedure is, I do not know.

Our program for cleaning up an infected herd is as follows: the cows are separated into three groups. Group number one is composed of all pregnant cows and cows with young calves. These cows are allowed three normal cycles after calving before being bred back. This sexual rest after calving is very important because of the ability of the parasite to occasionally survive in the gravid uterus.

Group number two consists of open cows, which, upon examination, are apparently normal. This group is allowed ninety days sexual rest and are then bred by artificial insemination. After calving, these cows are handled the same as group number one. Group number three is made up of all cows which are found to have a pyometra, or other uterine abnormalities. This group is treated until the reproductive tracts are apparently normal before being bred by artificial insemination.