

Practice Tips

“Practice Magic”

Moderator: Paul E. Johnson

7% Saline IV, A New Approach to an Old Problem

J. A. Hines, DVM
Adams Marquette Veterinary Service, Inc.
Route 2, Box 80
Oxford, WI 53953

In our practice we became interested in the use of Hyper saline after seeing some research on its use in calves and horses that was done at Ohio State University.

For years we had been using commercial fluid concentrates and diluting them for our fluid therapy. At best this procedure left much to be desired. Transporting large volumes of sterile water, calculating correct dilution, time required to administer fluids and cost to the client limited its use.

No commercial product was available that was labeled for use without dilution. We did use some of these products undiluted, besides being extra label many had warnings to use only diluted, so initially these were used only on the most severe cases.

Recently a 7% hyper saline solution has been made available commercially that is labeled for undiluted use. This product is marketed in liter bottles.

Our success in treating dehydration in scouring new born calves with 7% saline was so rewarding it was only logical to use the product in adult cattle.

Initially the cases we used this product for were cows with severe dehydration or shock from severe blood loss. After observing the dramatic response in these cases, we started to use the product in other situations.

Today we routinely use hyper saline in any toxic cow, any dehydrated cow, cows that won't drink because of stray

voltage, and even cows that are overheated.

The researchers tell us that the benefits of large volumes of isotonic fluids are absent shortly after the cessation of delivery of the fluid but this is not present with hypertonic saline solution.

One observation we have made in our practice is that many toxic or dehydrated cattle will not drink. Without exception cattle treated with hyper saline will immediately drink. We always make sure water is available after treatment. It is not uncommon to have a calf drink over a gallon of water and a cow drink 5 to 10 gallons.

Our dosage is 180 ml of hyper saline for a 100 lb calf given simultaneously with a liter of Lactated Ringers with 5% Dextrose. We try to take at least 2 minutes to deliver this IV.

For the average adult Holstein cow, we give two liters as fast as it will run through a 14 gauge needle.

Two liters of hypertonic saline has the same amount of saline as 6½ gallon of Lactated Ringers!

In our practice hypertonic saline has provided us an opportunity to provide the fluid therapy in many animals that time or economics would not have let us do in the past. With simultaneous use of nonsteroidal anti-inflammatory drugs we have been successful in treating many toxic cattle without using antibiotics.

High Heels for Holsteins or . . . THE THRILL OF VICTORY OVER THE AGONY OF DE FEET

Reilly Glore, DVM
Brady Veterinary Hospital
450-15 Monte-Brady Road
Montesano, WA 98563

The trend towards larger dairy herds which are confined on concrete surfaces for most of the cow's lactation

has insured that bovine lameness treatment continues to be a significant part of most veterinarians' routine. A com-

mon practice to alleviate foot pain and encourage rapid recovery has been the application of various devices to the healthy claw, in an attempt to prevent the cow from bearing weight on the diseased claw until healing is complete. Published methods include attachment of a wooden block with acrylic adhesive,¹ and building up the claw with a layer of plaster cast material.² A plastic "elevators" slipper which is attached to the foot with nylon cord and tape which has a build up under the medial or lateral claw has been marketed.³

All of the above procedures have some inherent disadvantages. The foot preparation for attachment of the wooden block is time consuming. The cow's foot must be restrained until the acrylic hardens which can be delayed in cold weather. The plaster of paris is not durable enough for use in wet concrete free stall operations. The plastic "Shoofs" do not fully remove weight from the injured claw. If a claw is of unusual shape, the shoof does not fit or stay on well.

In order to overcome these problems, I have been using 3" fiberglass cast as a material to construct a buildup under the good claw. Fiberglass cast is waterproof, extremely durable under barnyard conditions, easy to apply, and rapidly cures. One roll is sufficient to treat one foot. The brand we use is "K-CAST" manufactured by Kirshner Medical Corporation, 10 West Aylesbury Rd., Timonium, MD 21093. Order number 2828-03. We charge \$9.70 per roll for the material.

Application

After the foot is trimmed and the injured claw bandaged, the cast material is activated by dropping in a bucket of hot water for about 15 seconds. One wrap is made around the pastern as an anchor, being careful to leave it loose enough so the hardened cast material will not cut into the skin on the front or back of the pastern when the cow is walking. Then the material is folded back and forth

over the bottom of the good claw to form a build-up. One final wrap is made around the toe and pastern to finish the wrap off. The cast material sets up in 2-5 minutes. If a faster exit is desired the cast may be wrapped with one layer of 4 inch Vetwrap⁴ to keep it in place and the cow immediately turned out while the cast set up is completed. This is advantageous when more than one animal needs to be treated at the same time.

There are a few idiosyncrasies one needs to be aware of to successfully use this product. It can deteriorate if stored for prolonged periods in hot conditions. We refrigerate our stock to avoid problems. The resin tends to stick to bare hands. A special lubricating cream is provided and when applied to rubber gloves, the smoothing and forming process is greatly facilitated.

A properly applied fiberglass cast should be durable on wet manure laden concrete surfaces for 3 weeks or more. This procedure is very fast and produces a durable repair for a reasonable cost. This procedure can readily be taught to clients who prefer to treat their own foot problems. When the cast procedure is routinely incorporated into the lameness treatment protocol, cows return to production much faster as they can move around and eat normally. We have documented milk losses from mild lameness episodes of as much as 30 lbs per day. Prior to extensive use of the fiberglass casts, this loss could persist for 10-14 days. Now, with rapid intervention and casting, production loss is limited to 1 or 2 days. The income gained from avoided milk loss more than pays for the procedure.

References

1. Uecker, C.F. "Bovine Lameness" Proceedings AABP 11th Annual Convention, 1978 pg 103.
2. McCampbell, Hugh "Plaster of Paris Cast as a Block Under the Good Claw in Foot Treatment" Proceedings AABP 18th Annual Convention, 1985 pg 160.
3. "Shoof" Topmilk Developments LTD. Box 522 Cambridge, New Zealand.
4. Vetwrap 3M Company, Minneapolis, MN.

Spandex and The Dairy Scene: A Fashion Glimpse From the Northeast

Kevin D. Pierce, DVM
Hammond, NY

In New York State, coveralls have long been the attire of choice for bovine practitioners. However, after only a few years in practice I had become disenchanted with cloth coveralls. They were too hot and heavy in the summer. My wife tired of constantly sewing rips and tears. Worst of all, laundry was a constant chore because both the coveralls and the clothes under them were dirty on a daily basis. After months of searching for a better alternative to coveralls, I was introduced to KOOL DRI RAINWEAR while visiting some veterinarians in Wisconsin. They weigh only

12 ounces yet are durable enough to survive veterinary work. While they block the wind in the winter they remain cool and breathable in the summer. Best of all, they are waterproof so manure, urine, blood, and uterine fluids do not soak through. You can wash them off after every call and when you finish for the day the clothes underneath are still clean. KOOL DRI RAINWEAR is available from several hunting and fishing catalogs as well as direct from the company. For taller people like myself, extra length may be added by contacting KOOL DRI. Addresses and phone