



INNOVATIONS
ISSUE

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5

What Recent Veterinary Development Are You Embracing?

Veterinarians from five major equine hospitals share some of the advances in equine medical treatments they're already employing.

BY ELIZABETH PUTFARK



PHOTO COURTESY OF NEW BOLTON CENTER

▶ POLYACRYLAMIDE HYDROGEL

Alamo Pintado Equine Medical Clinic, Los Olivos, Calif.

Approved in Europe and pending approval in the United States, the polyacrylamide hydrogel Arthramid has impressed veterinarians at Alamo Pintado Equine Medical Clinic with its capabilities in managing osteoarthritis. A 1 cc dose of the hydrogel injected directly into the joint increases hydration while also providing a gliding surface in joints that may not respond as positively to steroids or other anti-inflammatories. Now available only via temporary FDA licensure and approved shipment from the European Union or Canada, the product is already in high demand.

“Whenever I can get my hands on the stuff I use it,” said Carter Judy, DVM, board-certified equine surgeon. “It’s really helping a lot of joints, especially fetlocks, that were not always being helped before. There’s a version that’s approved in the U.S. for facial reconstruction and cosmetic surgery in people because it stays around for a decade or more. That’s what makes this stuff so interesting—the longevity and how well it’s actually working when it’s in the joint. It’s got a lot of promise.”

▶ ROBOTICS-CONTROLLED IMAGING SYSTEM

Penn Vet’s New Bolton Center, Kennett Square, Pa.

The Equimagine robotics-controlled imaging system has the potential to dramatically expand the clinical and research capabilities of New Bolton Center, the first veterinary teaching hospital in the world to adopt the technology. Four recently installed robots work in teams of two to capture two- and three-dimensional images of horses from all angles, fluoroscopic images of horses in motion, and 360-degree digital radiographic studies.

“Short term, this helps us to identify things as early as possible in the disease process, earlier than with our standard diagnostics, and be able to identify something in a patient without putting the patient under general anesthesia,” said medical director Barbara Dallap-Schaer, VMD. “Some of our long-term goals will be to track some of the conditions that affect race horses and performance horses almost prospectively, track them at earlier stages in their careers, and hopefully intervene sooner. What we probably also will get to down the line is to look at horses’ joints in motion and try to learn more about the biomechanics and the loading of the limbs.”

► OOCYTE ASPIRATION

Rood & Riddle Equine Hospital, Lexington, Ky., Saratoga, N.Y., Wellington, Fla.

At Rood & Riddle Equine Hospital, more horse owners are turning to oocyte aspiration when other fertilization procedures, like embryo transfer, fail. Veterinarians harvest either mature or immature oocytes, or eggs, from the ovaries, and they are sent to one of three Intracytoplasmic Sperm Injection labs in the country for fertilization. Once fertilized, the oocytes return to the clinic where doctors attempt to grow an embryo from the egg in an incubator. If successful, the embryo gets transferred to a recipient mare who can carry the foal to term.

“It can be the mare that’s had fertility issues, or it can be the stallion, particularly if the stallion has become deceased, and there’s a very limited amount of sperm left from him,” explained Etta Bradecamp, DVM, board-certified theriogenologist. “You only need basically one sperm per oocyte, so you can use very, very small quantities of semen, which means you can get many, many ICSI doses from one regular dose, which can contain 200 million sperm. I still tell clients, if you can get

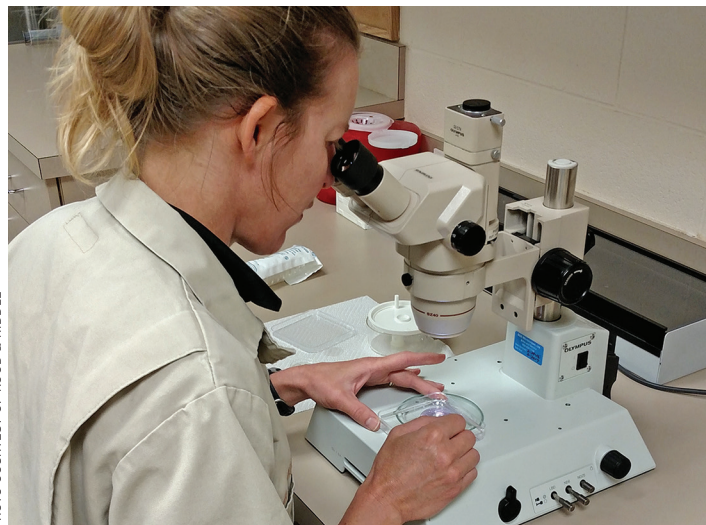


PHOTO COURTESY OF ROOD & RIDDLE

embryo transfer, you’ll be more successful, and it’s less expensive. Oocyte aspiration is reserved for those mares that have no other way to get the embryo, or if you only have a little good semen. Then, this is the next step we go to.”

► ELECTROCHEMOTHERAPY

Cornell Ruffian Equine Specialists, Elmont, N.Y.

At Cornell Ruffian Equine Specialists, electrochemotherapy has taken a critical

role in the treatment of cutaneous tumors in horses. After the anti-tumor chemotherapy enters either the tumor or tumor bed, veterinarians immediately deliver two electrical currents into the tissue bed, rotating the pronged current delivery device by 90 degrees after the first zap to deliver a perpendicular current following the first.

“What this technique has been reported to do in the literature, and what we’ve clinically seen, is to enhance the intercellular uptake of the anti-tumor therapy, in this case cisplatin, and cause more effective tumor kill, particularly on sarcoids, which can be pretty nasty,” said Samuel Hurcombe, BVMS, specialist in internal medicine and emergency and critical care at Cornell Ruffian. “What we’re finding is that with this more aggressive therapy up front, you can halt the tumor growth and stop regrowth with fewer treatments.”



PHOTO COURTESY OF PALM BEACH EQUINE CLINIC

► SURGERY PIT

Palm Beach Equine Clinic, Wellington, Fla.

At Palm Beach Equine Clinic, a newly constructed surgery pit has made surgical procedures more comfortable for veterinarians and horse owners. The four-and-a-half-foot recessed area allows doctors to perform surgeries on anything from the horse’s hock down from a standing position, while horses can forgo general anesthesia for a mild sedative and local nerve blocks.

“I think the human profession as well as the veterinary profession is trying to put themselves in a position to do more surgeries without general anesthesia, even though general anesthesia has improved dramatically over the last 15 years,” said PBEC President Scott Swerdlin, DVM. “This [surgery pit] was a way for us to do that and also make it so doctors don’t have to lay on the ground to do neurectomies. You make an assumption that possibly we can do a better job if we’re not physically uncomfortable. And as the doctors are aging, it gets harder and harder to get down on your knees for surgery!”

PHOTO COURTESY OF CORNELL RUFFIAN EQUINE SPECIALISTS