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## Update on Project: M.A.R.E.

# Running Again

by Jeanie Robinson-Pownall

The Emergency Service at VHUP, the Veterinary Hospital of University of Pennsylvania, treats many animals with traumatic injuries. One of the most devastating can be an “HBC,” or “hit by car.” Veterinarians, nurses, and technicians rush to save the animal’s life. The challenges are immense. Sometimes, the rehabilitation can be more complex and difficult than the initial treatment. Dr. Jeffrey S. Christiansen, a resident in small animal surgery, worked with rehabilitating a very special “HBC” patient who had been stabilized elsewhere.

Elsie, a one-year-old spayed female mixed-breed, was referred to VHUP by her local veterinarian, who treated her immediately following the accident. She exhibited weakness in all four legs and was unable to walk. After four days of conservative management, consisting of cage rest and the anti-inflammatory medication prednisone, Elsie’s veterinarian referred her to VHUP for

further evaluation and treatment.

Elsie presented at VHUP with her left pupil contracted, but with normal mental and other cranial nerve functions. She had no motor ability in the left front limb and no feeling below her

increased muscle tone. Due to gradual improvement in the other three limbs, the owner elected to continue with conservative therapy including cage rest for two weeks, followed by passive range-of-motion exercises in her left front limb.

The possibility of severe self-mutilation was discussed. (Self-mutilation frequently occurs in animals who have lost feeling to a particular area. Humans describe a feeling of numbness or pins-and-needles from the damaged nerves. When animals experience this feeling, they tend to chew the area, often quite severely.)

At six weeks post-injury, Elsie had regained normal use in three limbs, but showed no change in her left front leg. Over the next six months Elsie’s regime included splints, aggressive physical therapy to overcome muscle atrophy (including swimming every night, a privilege for which her owner traded masonry work on the swimming pool), and



Chris Curtain and Elsie wearing her orthotic.

elbow. The right front limb demonstrated motor ability with normal muscle tone and flexion. Both hind limbs demonstrated motor ability and

treatment of abrasions on the top of the foot from inappropriate weight-bearing. At eight months post injury surgery was performed to fuse the carpal (“wrist”) bones.

At ten months post-injury (eight weeks post-op), the bandage was removed. Elsie was encouraged to walk at a controlled gait to help her place the paw normally. After two weeks it was clear that she was knuckling over and weight-bearing improperly approximately 50% of the time. She had developed more ulceration and abrasions on the top of her foot. These injuries were treated as previously, and a rubber boot (Lewis Dogboots™, based in Enid, OK) was placed to help keep her paw in a weight-bearing position.

This was initially successful, and the dog was able to run and bear weight normally with the boot. After a few months of this, the owner explained that her foot would become soaked after just a few hours of wearing the boot. This caused the tissues to become macerated and easily abraded or ulcerated. She would weight-bear normally 80% of the time, but would still knuckle over occasionally. The boot had to be wrapped to her leg with adhesive tape in order

## Update on Project: M.A.R.E.

Researchers at the School of Veterinary Medicine received funding from the Pennsylvania Department of Agriculture for a three-year study to identify the causes of abortion and pregnancy wastage in horses in Pennsylvania (Project M.A.R.E. — Monitoring Abortions and Reproductive Efficiency in Pennsylvania). The study is now in its final season. Dr. Patricia Sertich, assistant professor of reproduction, and Dr. Perry Habecker, assistant professor of pathology, are the chief investigators. The grant is underwriting the cost of necropsy, diagnostic tests, and associated costs — everything is provided free of charge to the mare owner.

Any horse breeders interested in participating in the project should call for a breeding management survey. Any Pennsylvania breeder with a mare that experiences pregnancy loss

can have a complete diagnostic work-up to determine the cause of loss with all expenses paid by the Pennsylvania Department of Agriculture. Veterinarians who provide reproductive care for these breeding farms were also solicited to participate in Project: M.A.R.E. and receive information and materials to properly submit diagnostic specimens for determination of the cause of pregnancy loss in any aborting mares

If you or someone you know would like to become enrolled in Project: M.A.R.E., please contact us. Results of the study will identify the causes of pregnancy wastage of mares in Pennsylvania. Once these causes are identified, we can develop research projects to help control the pregnancy loss. Please contact Patricia Sertich, V.M.D. at 610.444.5800 x 2229 or Perry Habecker V.M.D. at 610.444.5800 x 2385.