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Pearls for the Practitioner

Topic: Stem Cell Therapy

The Animal Medical Center has created this e-mail publication to keep you informed about the latest practices in veterinary medicine and how these practices are being applied at The AMC. If you are interested in obtaining past issues of "Pearls for the Practitioner" or if you would like to be removed from this mailing list, please e-mail lynne.freeman-gassem@amcny.org.

The Vet-Stem Company has developed a technique for purifying mesenchymal stem cells from subcutaneous fat (under the skin) in dogs. These are not the controversial embryonic stem cells; however they do possess the ability to develop into any cell in the body. They have shown the ability for these stem cells to develop into cartilage cells in animal models based on the environment into which they are injected. Once they are injected into an inflamed joint with arthritis, they will develop into cartilage cells to help repair the damage caused by osteoarthritis.

Logistics: Animals must have a consultation with a Vet-Stem credentialed veterinarian (Drs. Schwartz, Spector, Buote, Leasure and Petre at The AMC). During that consultation we will discuss if the pet is truly a candidate for the treatment. This includes a physical examination, full blood work and chest radiographs. Any type of cancer is a contraindication to this therapy. As of right now, it is only indicated for osteoarthritis and no chronic medical or neurological condition. If the pet is deemed to be a candidate, it will return for an outpatient "fat harvest" during which an incision is made in either the groin, behind the shoulder blade, or a small incision into the abdomen. The patient is discharged that evening and the vials of fat are shipped overnight to California for processing. In 48 hours the pet comes back (again as an outpatient) for sterile injections into the affected joints under sedation. Multiple joints may be injected and we've seen good results in the hips, stifles and elbows so far.

Results: Recheck examinations are required at 30, 60 and 90 days after the injection to evaluate the improvement. Both the owners and the vets will score the lameness. This is NOT a magic bullet to prevent the need for any other medications or to make the dog act like a puppy again. If there is a surgical disease (i.e., ACL tear), we recommend surgery with the possibility for doing stem cells down the line. However, we have seen good results in the patients we've injected. They have started to be able to go for longer walks, jump on and off the bed again and have a more comfortable life.

The Department of Surgery at The AMC

The surgeons at The AMC, who are certified by the American College of Veterinary Surgery, provide seven-day-per-week expertise, state-of-the-art surgical techniques and emergency surgical care. We also offer specialty services such as veterinary dentistry, rehabilitation and pet fitness services, orthopedics and soft-tissue surgery. Our surgeons work closely with internal medicine, oncology, radiology, critical care and pathology specialists to coordinate testing and to determine the least invasive and effective procedures necessary to optimize patient outcomes.

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