MESENCHYMAL STEM CELL THERAPY FOR FOAMY VIRUS-POSITIVE CATS WITH CHRONIC GINGIVOSTOMATITIS

PROJECT STUDY: Allogeneic adipose-driven mesenchymal stem cell therapy for foamy virus-positive cats with chronic non-responsive gingivostomatitis.

Boaz Arzi; University of California-Davis

Final report summary, W14-044

These investigators examined the use of mesenchymal stem cells to treat cats with naturally occurring, refractory chronic gingivostomatitis. Feline chronic gingivostomatitis (FCGS) is a severe, inflammatory oral disease of cats that is often refractory to treatment and is estimated to affect 0.7% of cats that present to veterinary practices. FCGS is debilitating and may result in euthanasia of severely affected cats. The pathogenesis of FCGS is poorly understood but is thought to represent a host immune system that responds inappropriately to chronic oral antigenic stimulation secondary to underlying oral disease or clinical/subclinical viral infections.

They completed a clinical trial to determine the efficacy of autologous adMSCs to treat cats with refractory FCGS. The procedure was determined to be safe and in 71% of cats, led to significant disease improvement.

They then addressed treatment of FCGS cats that were also positive for syncytial foamy virus (FeSFV+). This non-pathogenic retrovirus hinders the successful expansion of autologous adMSCs from a subset of cats. To date, they have completed the enrollment of 7 cats for allogenic adMSC therapy. Of the 7 cats, 4 have already exited the study and a follow up of up to 1.5 years is available. Two of the cats are completely cured and did not suffer a relapse of the disease and 2 cats did not respond and were euthanized approximately 6-12 months after exiting the clinical trial. Three cats are still in the study, out of which one has substantial clinical improvement and 2 cats that are in early observation period.

Summary prepared by Melissa A. Kennedy, DVM, PhD, DACVIM © 2016