

Case Report of Chronic Elbow Lameness

Patient Data

Breed: Bull Mastiff
Age: 2 yrs, 5 months
Sex: Neutered female



History

At least 3 months prior to enrollment in the study, a fragmented coronoid process was removed from the right elbow of this Mastiff. NSAID use once a day, only mildly helped with the symptoms, thus the owners wanted another option to deal with the problems.

Pre-Treatment Exam

On December 12, 2006:

- Physical: Healthy, ideal weight
- Orthopedic: Persistent lameness at a walk and trot, mild pain on manipulation, pain at less than full range of motion and stiffness causing noticeable difficulty walking or running (Table 1).
- Radiographic: Severe degenerative joint disease with osteophytes, moderate subchondral sclerosis, moderate remodeling of the bone and slight joint effusion
- Clinical chemistry analysis: Within normal limits
- Owner evaluation. The owner felt that the most severe problems were inability to jump into the car or on furniture and difficulty in getting up from lying down (Table 2).

Adipose Collection

Also on December 12, 2006, adipose (19.9 grams) was collected from the inguinal area.

Stem and Regenerative Cells Injection

On December 14, 2006, the right elbow was injected intra-articularly with 3,300,000 stem and regenerative cells from the dog's own adipose tissue.

Exams Post Stem and Regenerative Cell Treatment

On January 11, 2007:

- Orthopedic exam: Improvement in 4 out of 5 parameters
- Owner assessment: Improvement in 5 out of 12 (1 not assessed) parameters, worsening in ability to jump into the car or on furniture

On February 13, 2007

- Orthopedic exam: Less lameness at a walk; other parameters remained the same as at 30 days post treatment
- Owner assessment: Dramatic improvement in ability to jump into the car and in ability to get up from lying down

On March 15, 2007

- Orthopedic exam: 3 out of 5 of the parameters were normal, improving two scores from the pre-treatment exam
- Owner assessment: 8 out of 10 (3 normal at initial exam) parameters improved to normal, including ability to get up from lying down

Summary

Chronic elbow osteoarthritis is a debilitating disease and in this dog caused a reduction in the quality of life that was not relieved by NSAID therapy. A single treatment with autologous stem and regenerative cells provided an improvement in nearly all parameters measured including a return to a normal lameness score by the attending veterinarian.

Table 1 – Veterinary Orthopedic Examination Data

Right Elbow	Pre-treatment	Day 30	Day 60	Day 90
Lame-walk				
Not detectable			1	1
Intermittent		2		
Persistent	3			
Persistent-Non				
Ambulatory w/assist				
Non-ambulatory				
Lame-Trot				
Not detectable				1
Intermittent		2	2	
Persistent	3			
Persistent-Non				
Ambulatory w/assist				
Non-ambulatory				
Pain on Manipulation				
No pain				
Mild Pain	2	2	2	2
Severe Pain				
Range of Motion				
No limitation				
Pain only at full		2	2	2
Pain at less than full	3			
Pain at any attempt				
Functional Disability				
Normal activity				1
Slightly stiff gait		2	2	
Stiff	3			
Very stiff				
Does not want to walk				
Subjective				
Worse				
Unchanged				
Slightly improved			3	
Good improvement		2		2
Excellent				

Table 2 – Owner Quality of Life Evaluation Data

Owner Evaluation				
	Pre-treatment	Day 30	Day 60	Day 90
Walk				
No problem	1	1	1	1
A little				
Quite a bit				
Severe				
Won't do				
Run				
No problem				1
A little	2	2	2	
Quite a bit				
Severe				
Won't do				
Jump, eg car, furniture				
No problem				
A little			2	2
Quite a bit				
Severe	4			
Won't do		5		
Turning suddenly				
No problem				1
A little		2	2	
Quite a bit	3			
Severe				
Won't do				
Get up from lying				
No problem				1
A little			2	
Quite a bit				
Severe	4			
Won't do				
Lying down from stand				
No problem		1	1	1
A little				
Quite a bit	3			
Severe				
Won't do				
Climbing stairs				
No problem				1
A little	2	2	2	
Quite a bit				
Severe				
Won't do				

Table 2 Continued
Owner Evaluation

	Pre-treatment	Day 30	Day 60	Day 90
Descending stairs				
No problem				
A little		2	2	2
Quite a bit	3			
Severe				
Won't do				
Squatting to urinate				
No problem	1	1	1	1
A little				
Quite a bit				
Severe				
Won't do				
Stiffness in am				
No problem		1	1	1
A little				
Quite a bit	3			
Severe				
Won't do				
Stiffness at end of day				
No problem		1	1	1
A little	2			
Quite a bit				
Severe				
Won't do				
Difficulty-slippery floors				
No problem				1
A little	2	2	2	
Quite a bit				
Severe				
Won't do				
Willingness to play-v				
No problem	1	1	1	1
A little				
Quite a bit				
Severe				
Won't do				
Condition change				
Become worse				
No change		4		
Slightly improved				
Marked improvement			2	2
Excellent				
Energy level				
Become worse				
No change				
Slightly improved		3	3	
Marked improvement				
Excellent				1