

President's Message

Kirk Peck, PT, PhD, CSCS, CCRT, CERP

NEW BEGINNINGS

I hope all of you are now enjoying the transition from spring to summer activities. In my home state of Nebraska, the unpredictability of weather forecasting is what people find most perplexing this time of year. On any typical day in April or early May our inhabitants may enjoy a lovely afternoon basking in the hot sun while the next day might turn into a 6-inch snow fall. In less than 24-hours, temperatures may soar to 80° again without any rhyme or reason. It is all part of daily life living in the Midwest and comes without pomp and circumstance to those who were born and raised in “middle earth.” But again, I emphasize the importance of transition. Winter gives way to flowers in the spring, which ultimately leaves blame to weeks of drought in the hot summer months when rain is nowhere to be found. Life transitions can be both fruitful and productive or tainted with negative outcomes, but either way, change is an inevitable part of progress.

So, why drone on about the change in seasons you might ask? Simple truth, this is my final year serving as ARSIG President as I will have completed two full terms at the end of CSM 2019. Therefore, the time has come for a fresh beginning with new leadership at the helm. Luckily, transitioning a new officer into SIG functions will be much easier with a recently developed comprehensive strategic plan to pave the way for current and future activities. All that remains now is for individuals to step-up to the plate and be nominated for ARSIG President. To help sway potential candidates, I urge you to review all the new and exciting initiatives planned for future growth in animal rehabilitation. The complete ARSIG Strategic Plan is publically accessible at <https://www.orthopt.org/content/special-interest-groups/animal-rehabilitation>

APTA POSITION STATEMENT

During the 2018 APTA House of Delegates (HOD) held in Orlando, Florida, this past June an RC motion to revise the position statement related to collaborations between physical therapists and veterinarians was introduced. The APTA currently has position statements related to Veterinarian/Physical Therapist relationships, but updated language was needed to better reflect current state of practice for physical therapists treating animals. Although I was not present during the HOD this year, I was involved in reviewing the draft language for the proposed motion. Final language for the new Position Statement should be available shortly.

SILENTLY THEY SPEAK

There is an echo of unfortunate criticism often directed at physical therapists who treat animals that needs to be respectfully dispelled. The argument implies that physical therapists are out of their educational boundaries when it comes to treating animals since “real” animals are unlike those portrayed in *Charlotte's Web*.

For Pete's sake the argument continues...animals are incapable of articulating past medical history, explaining mechanisms of injury, or vocalizing levels of pain on a scale of 1 to 10 using

human dialect. So how can physical therapists competently and effectively treat critters of non-human origin? After all, academic degrees in physical therapy do not include courses on how to “read” the ears of a horse signifying either relaxation or aggression while mobilizing a thoracic rib, or recognize the need to restrain a dog, even those with Snoopy-like personas, prior to physically palpating a strained iliopsoas muscle. So until the day comes to pass when animal rehabilitation becomes a standard elective in physical therapy programs, or possibly its own academic degree, reading clinical signs of pain, anxiety, and depression in dogs, horses, Mongolian rodents, or whatever animal you prefer, seems to be an elusive competency that no physical therapist can acquire...or so the argument goes. To that assumption I reply, “Really...Is that honestly a proven fact withstanding the rigor of a double-blinded controlled study?”

I imagine that most physical therapists who expand their professional horizons into treating animals are most likely the same people who grew up with pets of all sizes, shapes, and species, and learned to recognize a thing or two regarding certain animal behaviors as a natural part of life. No, I am not suggesting that pet owners are automatic “experts” in learning to detect key signals of animal language, especially when giving a physical examination to specifically localize pain. However, people who spend a good deal of time around animals for any given reason certainly do learn a trick or two. These tricks include passive observation and general experience in the language of animals through use of body language, vocalizations, and change in personal behaviors.

The illogical argument against physical therapists treating animals leads into a baseless assumption that possession of an innate ability to understand the language of animals is germane to only the veterinary profession. However, this argument fails the test of reality. Understanding and communicating with animals on a non-verbal level is not specific to any one profession. For the most part, it is a skill that cannot be effectively taught in formal education aside from recognizing positive and negative signs to look for during a physical examination. Physical therapists are certainly capable of learning to read various animal postures and body language indicating potential areas of pain and discomfort, much like they do with human clientele. In addition, physical therapists are well-versed in how to communicate with humans as part of practice, and therefore, should have little difficulty asking appropriate questions of animal owners to facilitate knowledge acquisition.

It should also be noted that the more experience one gains handling animals, the more natural it becomes from a standpoint of recognizing questionable signs and behaviors. Developing personal abilities to detect animal expressions of pain, reading body language, palpating irritable tissues, and observing clear indicators of discomfort, fatigue, and malaise, are all obtainable skills that develop over time. The reader should keep in mind, however, that like any new skill to be learned or acquired, variability in individual competency will exist.

Finally, we have all learned since we were children that animals speak their own language using mechanisms that do not incorporate the human equivalent of Broca's area of speech production. If animals could actually speak, then *Planet of the Apes* just moved

beyond fantasy entertainment, and life just took on a whole new meaning for many of us. The fact is physical therapists are perfectly capable of delivering the same level of skill used in human rehabilitation to effectively treat language deficit organisms. So if you ever become the recipient of someone claiming that physical therapists should not be treating animals simply because they cannot speak using common human vocalizations...well, let's just say, I now hope you get the picture!

Contributory Acknowledgment

In this edition of *OPTP*, Thomas Maybury and Kirk Peck offer a brief review of medial shoulder instability followed by a personal case study of Tucker. This case is a great example of how the incorporation of using a model of conservative care for a canine with mild shoulder instability can have very positive results.

*“Yep, The World Still Looks
The Same Upside Down, &
No Change In Blood Pressure”*



**Rizzo & Frenchy enjoying the day
from a different perspective!**

Photo Courtesy of Kirk Peck

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A Conservative Approach to Treating Medial Shoulder Instability

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Medial shoulder instability (MSI) in the canine client is a relatively common condition, especially in sporting dogs where the integrity of anatomic structures that restrict end range shoulder abduction are repetitively stressed or acutely traumatized.¹ For example, tensile stress applied to the shoulder joint capsule, medial glenohumeral ligaments, and tendons of the subscapularis and supraspinatus can become problematic as a dog maneuvers against agility weave poles.

Without the benefit of possessing an anatomic fibrocartilaginous labrum to deepen the glenoid fossa and add stability to the glenohumeral joint, the canine client must rely on soft tissue and ligamentous structures to retain functional joint integrity of the shoulder complex.² Medial dynamic stability of the shoulder is particularly reliant on muscle and tendon strength of the subscapularis, supraspinatus, biceps brachii, latissimus dorsi, and superficial and deep pectoral muscles.³⁻⁵ Therefore, a key component to pre-

venting MSI is proper conditioning of contractile tissues through strengthening, core stabilization, and muscle endurance activities to prevent fatigue during both training and competition.

The most accurate method of diagnosing canine MSI is arthroscopic exploration performed by a veterinarian.⁴ Radiographic and magnetic resonance imaging may confirm injury to various anatomic structures of the shoulder complex, but hold minimal value in specifically diagnosing MSI. The most validated clinical examination for MSI is to lie the client in a laterally recumbent position, stabilize the scapula, extend the shoulder, and then abduct the glenohumeral joint in isolation of scapular movement. Experts generally agree that abduction of the glenohumeral joint beyond 40° while performing the examination indicates a potential MSI with the severity of injury increasing as abduction moves beyond 65° to 80°.⁶ The evaluator must compare both shoulder joints for asymmetries to confirm the clinical diagnosis.

Treatment for MSI may require surgery in severe cases to stabilize the glenohumeral joint to more conservative care to manage mild to moderate instability.⁷ If surgery is used for anatomic stabilization, then a comprehensive postoperative rehabilitation program will be needed to maximize successful client outcomes. Duration for return to sport may range from 6 to 9 months depending on the case. Nonsurgical treatment for MSI will also require a well-structured plan of care that adheres to the rules of specific tissue healing rates, and physical abilities attributed to individual dog breeds, home/life situations, and client/owner functional goals.⁸⁻⁹

Below is a case example of a dog that was diagnosed with MSI through clinical signs and symptoms, and treated conservatively primarily by the owner after instruction from a physical therapist certified in canine rehabilitation.

CASE STUDY

Tucker is a 6-year-old Vizsla/Bulldog Mix. Between the ages of 12 and 24 months, he sustained an undisclosed injury to the right shoulder. The primary veterinarian caring for Tucker at the time of injury was unable to determine the exact pathology resulting in right forelimb lameness. The injury remained untreated for approximately 6 months secondary to a lack of direction for an undiagnosed condition.

In the spring of 2016, Tucker was evaluated by a physical therapist certified in canine rehabilitation. Evaluation revealed the following: notable lameness on the right forelimb with excessive internal rotation of the glenohumeral joint during stance phase, general muscle atrophy surrounding the right shoulder complex, loss of muscle mass and tone of the pectoralis muscles, and a positive sign of increased range of motion (~ 50°) with shoulder abduction from an extended position with manual stabilization of the scapula. The MSI abduction test on the left forelimb was ~ 35°. Tucker expressed no signs of pain during gait or with any physical assessment of forelimb mobility on the right.

A home-based individualized plan of care (POC) was developed for Tucker and his owner using an 8-week rehabilitation protocol. See MSI Table on the following page. Tucker's POC was particularly unique in that his owner happened to be a student enrolled in a doctor of physical therapy program during the time of rehabilitation so he was capable of performing higher level treatment techniques, including joint mobilization. In addition, Figures 1-3 are 3 examples of strengthening and balance exercises Tucker completed with assistance from his owner.

Table. Medial Shoulder Instability: Conservative Rehabilitation Program

Medial Shoulder Instability Conservative Rehabilitation Plan of Care			
Time Frame	Daily Exercise (2x/day)	Therapeutic Exercise (2x/day)	Restrictions
0-7 days	- ¼ mile walk	- Weight bearing on single leg (3x30 sec) - Walking in clockwise/counter-clockwise circles (x10 each direction) - Physiological passive ROM of R anterior leg (20 min) - Joint mobilizations of anterior R shoulder – grade 2 (5 min) - Sit to lie (2x10)	- No agility - No sprinting - No lateral movements - No toys - No roughhousing with other dogs
7-14 days	- ½ mile walk - Slow jog in straight line (5x 300 ft)	- Same as above (increase reps as tolerated) - Horizontal adduction in weight bearing (2x10) - Physical therapist assisted manual weight shift front to back/side to side (3x30 sec) - Static anterior legs weight bearing (3x30 sec) - Physiological passive ROM of R anterior leg (20 min) - Joint mobilizations of anterior R shoulder – grade 3 (5 min)	- No agility - No sprinting - No lateral movements - No toys - No roughhousing with other dogs
14-28 days	- 1-2 mile walk	- Same as above (increase reps as tolerated) - Moderated jog (50%) in straight line (10x300 ft) - Dynamic anterior legs weight bearing (wheel-barrel) (5x25 ft) - Push-ups (army crawl) (2x10) - Mild agility with toys (limit lateral movement) - Ascend/descend stairs (3x1 flight) - Joint mobilizations of anterior R shoulder – grade 4 (5-10 min)	- No sprinting - No lateral movements - No roughhousing with other dogs
28-42 days	- 2-4 mile walk/jog - Fetch with toys (5-10 min)	- Same as above (increase reps as tolerated) - agility with toys (slowly progress lateral movement) - controlled interaction with other dogs (5-10 min bouts)	- Watch for signs of fatigue
42-60 days	- 3-5 mile walk/jog - Resume regular fetch activities	- Same as above (increase reps as tolerated) - Resume normal play with dogs as tolerated by fatigue	
Abbreviations: ROM, range of motion; R, right			

Sample Strengthening and Stabilization Exercise (Figures 1-3)



Figure 1. Progressive weight bearing.



Figure 2. Dynamic shoulder adduction strengthening.



Figure 3. Single leg stance for stabilization.

OUTCOMES

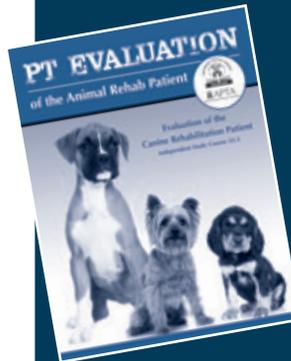
Following 8 weeks of structured rehabilitation, Tucker successfully returned to long-distance running with his owner and playing with age-related levels of canine enthusiasm. His owner was unequivocally pleased witnessing his dog return to a high level of function with improved quality of life.

Medial shoulder instability is a medical condition that can occur with any dog, but is most prevalent in the sporting populations. The pathology involves some degree of disruption of anatomic structures on the medial aspect of the glenohumeral joint. The result of injury often leads to shoulder instability causing various levels of lameness during gait, and loss of physical function with daily activities or specific to sport play. However, with carefully structured rehabilitation, either postoperatively or conservative care, most dogs can restore shoulder joint stability and return to desired levels of function.

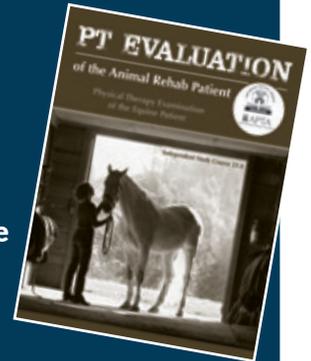
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