Cupping with RockPods™ in Canine Rehabilitation: Case Studies (Part 2 of 2)

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RockPods™ are a cupping therapy device consisting of "rubbery suction bell-shaped pods" made of silicone and designed, manufactured, and marketed by RockTape. RockPods can be used to provide a compressive-decompressive gradient to skin via suction similar to traditional cupping tools, thus increasing local circulation, and can be used in coordination with manual therapies, instrument assisted soft tissue mobilization, kinesiology taping, and corrective therapeutic exercise.

Though it is not often that the opportunity arises to practice cupping on a canine rehabilitation patient, it has potential to be an effective treatment modality. The ideal patient characteristics for application of RockPods include a short coat, with functional limitations or impairments associated with myofascial restriction generally located on the dorsal, dorsolateral or lateral torso, abdomen, and/or extending lateral to the proximal thoracic or pelvic limbs. The patient's temperament can also be a contributing factor for tolerance (and successful use) of the modality. The following is a description of a series of 2 canine rehabilitation cases, which met those basic criteria, in which RockPods were successfully used as part of a comprehensive therapy approach, per a proposed treatment protocol established in the previous publication.

Case Study 1: Barney, an 11-year-old neutered male Boxer

Barney initially presented for rehabilitation on April 17, 2021 with lameness suspected to be due to a chronic biceps tendinopathy, neoplasia, or shoulder muscle strain. No formal rehabilitation had been undertaken despite initially being referred upon consultation at his primary care veterinarian on June 17, 2020, when he first presented with intermittent weight bearing lameness. Barney had been medically managed with cartrophen injections, weekly carprofen (Rimadyl), and paracetamol (Panadol). (The referring veterinarian noted that the latter product was prescribed for short term/interim use only as off-label). He was also being given "golden paste," a turmeric supplement. The owner had been walking Barney up to 45 minutes daily.

Objective Examination

Behavior: Calm to unsettled.

BCS: 6/9[1]

Stance: Slightly cranial weight shift, bilateral forelimb and hind limb carpal and tarsal drop ("rabbit foot").

Gait: Even and slow with low head carriage and flat top-line to mild head bob on left forelimb weight bearing.

Forelimb palpation and ROM: No pain on palpation bilaterally at shoulder, biceps tendon, elbow, or carpus (and at subsequent sessions) with reduced ROM in flexion and extension. (This was assumed to be due to osteoarthritis due to Barney's age.) Subjectively, muscle development was noted to be average, given his age.

Spinal palpation: Severe restriction was noted at the dorsal/dorsolateral thoracolumbar to lumbosacral musculature with "adhesion" of fascia to the underlying muscle layer.

Goals and Treatment Plan

It is hypothesized that the forelimb lameness was a secondary issue related to chronic thoracolumbar and lumbosacral pain. The plan was to use massage, Bowen therapy, mobilization, LASER,[2] acupressure, traction, passive range of motion (PROM), stretching, and cupping to address:

- Thoracolumbar and lumbosacral tightness/stiffness and soft tissue trigger points and adhesions.
- Thoracolumbar and lumbosacral pain.
- Forelimb lameness.

Treatment Summary and Patient Response

Rehabilitation treatment was initiated as shown in the photos (bottom of page 312). Additionally, as part of the home program, the owner was advised initially to reduce walk duration to 10 minutes on-lead twice daily.

Following the first session, the rehabilitation practitioner chose to use RockPods (in addition to other modalities) to reduce tension and trigger points in the muscles of the thoracolumbar and lumbosacral area.

On the first occasion in which RockPods were used, session #2, Barney was initially unwilling to stand, lie, or remain still. Two large RockPods cups were placed over bilateral iliocostalis and 4 small cups over bilateral longissimus in the lumbar region. The cups were applied with a plunger technique with ultrasound gel applied generously to the edge of the cup rims and left in a static position for approximately 4 minutes. Barney settled a couple of minutes after all cups were placed and lay still for the remainder of the session. After approximately 4 minutes, the first cup naturally decompressed and fell off the treatment area, at which time the remaining cups were gently manually removed by squeezing the bell on opposite sides of the RockPod to release the suction.

Following treatment, the rehabilitation practitioner palpated the iliocostalis and longissimus muscles, noting reduction in severity of muscle tension and trigger point latency.

At the third rehabilitation session, 2 weeks later, the practitioner noted moderately tight brachiocephalicus and cleidomastoideus with trigger points within the muscle bellies, and active trigger points at bilateral L2-4 longissimus and transversus abdominus.

Two large RockPod cups were placed over the bilateral lateral iliocostalis and 2 small cups over the bilateral longissimus in the same manner as previously. Additionally, the practitioner applied gentle lifting of the cups with gentle circular rotations while maintaining suction, for 30 second repetitions. Upon removal of the cups, the tight muscle groups as noted above, were reduced to moderate tightness.

The practitioner attempted to place the large cup over the trigger point of the right brachiocephalicus and cleidomastoideus, however, compression or suction of the cup was not successful due to underlying curvature of the muscle surface.

Treatment Summary and Patient Response

Modalities	Session 1	Session 2	Session 3	Notes
Massage	x	x	x	Effleurage, palmar rotations, cross friction, skin rolling, and raking to bilateral thoracolumbar and lumbosacral epaxials (T10-11 to L7-S1) & latissimus dorsi, hamstrings and gluteals.
Bowen therapy	x			Lumbar, midback, and sacral sequences.
Traction	x			Tail rotations and traction.
Laser (Class IIIb)	x	x	x	SpectraVet 904-200SP: CW 60s 12J/point. SpectraVet 810-500: CW 60s 30J/point. To bilateral shoulder intra-articular joint capsules and dorsal intercostal spaces at T12-L7 and dorso-lateral internal and external obliques.
Mobilizations		x	x	Grade I-II dorsoventral and lateral spinal mobilizations T10-S1.
Acupressure		x		BH/GV20, GB29/GB30/Bl54, St36, Ki27, Bl23, Sp21
Cupping		x	x	Over lumbar epaxial muscle trigger points for ~4 minutes per point.
ROM/Stretches		x	x	Forelimb/hindlimb flexion/extension x3 with a 30 second hold at endrange.

Re-evaluation Findings

Following the cupping therapy sessions, Barney's owner reported that he had "run off to the neighbor's for the first time in months" and that he was "running around a couple of times" between the sessions. (Prior to initiating rehabilitation, Barney had "been too lame" to run.) The rehabilitation practitioner also noted an increase in sagittal shoulder extension by about 50%. The practitioner advised the owner to review Barney's pain management medications with the veterinarian.

Acupressure points used in the second treatment session were referenced from this image.[3] Reprinted with permission from Tallgrass Animal Acupressure Resources.

Case Study 2: Billy, a 13-year-old neutered male Greyhound

Billy was referred by the veterinarian to rehabilitation for treatment of chronic back pain, possibly due to IVDD. He had received Cartrophen injections for 3 months and was prescribed gabapentin and Previcox (firocoxib). At the time that he initiated rehabilitation, Billy was walking approximately 10 minutes daily, though was noted to struggle to walk longer or further, as the owner noted that Billy seemed to enjoy his walks. It was noted that Billy would drag his hind limbs, scuffing his nails. Previous medical history included a right hind limb 0.5cm cutaneous hemangiosarcoma removed from the proximal caudal thigh and another lump (without pathologic examination) removed from the left forelimb lateral caudal pad.

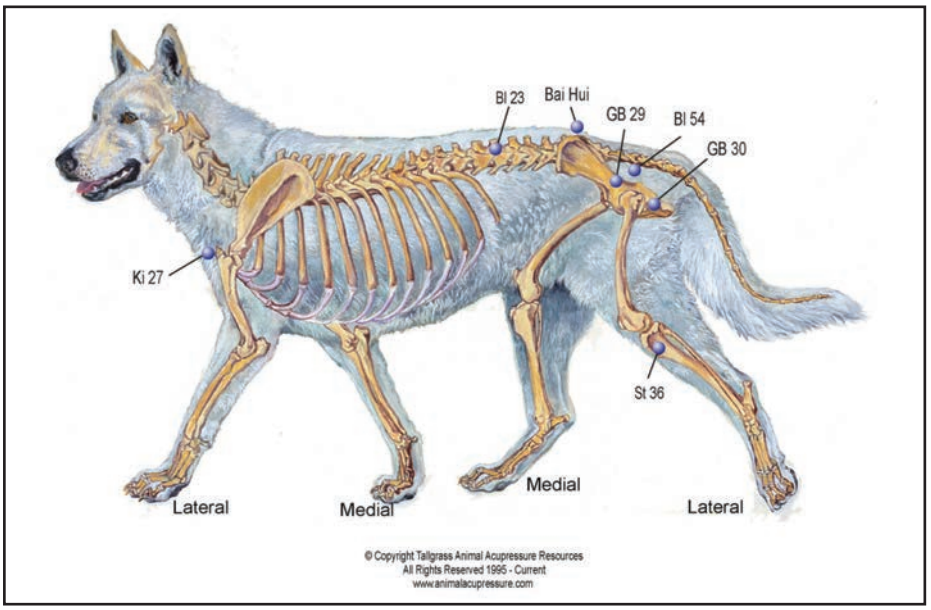
Objective Examination

BCS: 4/9 (1)

Stance: Stable weight bearing with occasional hindlimb incoordination and imbalance, causing the hindlimbs to cross over with off-loading of alternate hindlimbs.

Gait: At a walk, Billy had a "fluid" gait, but with mild right hind limb ataxia. On turning right, Billy would initially hop, non-

Barney during cupping therapy.



Acupressure points used in Barney's second treatment session were referenced from this image. Reprinted with permission.

weight bearing on the right hind limb. His forelimbs were positioned more midline than expected during the stance phase of gait and his hind limbs were positioned more laterally during stance phase.

Orthopaedic: His tail was tucked between hind limbs, unable to actively or passively extend it.

PROM: Reduced carpal flexion with crepitus and thickening palpated at the joint line.

Muscle tone: 2/5

Atrophy: 2/5 generally to hamstrings and quadriceps, infraspinatus and supraspinatus. (Using subjective scales for tone: 5/5 being hypertonic, 1/5 hypotonic; and Atrophy: 1/5 minor atrophy. 5/5 major atrophy.)

Palpation: Trigger points palpated at right longissimus T10-L5 with muscle tension (guarding) noted along the bilateral lumbar paraspinals and bilateral quadratus lumborum.

Behaviour: social, active, and inquisitive

Goals and Treatment Plan

It is hypothesized that the functional limitations (reduced walking distance/duration) and reduced quality of life are due to lumbosacral pain. The plan was to use massage, Bowen therapy, mobilization, LASER,[2] acupressure, traction, PROM, stretching, kinesiology taping, and cupping to address:

- Thoracolumbar and lumbosacral tightness/stiffness and soft tissue trigger points/adhesions.
- Thoracolumbar and lumbosacral pain.
- Lumbosacral muscle tightness.
- Restricted passive tail extension due to lumbosacral pain.

Treatment Summary and Patient Response

Treatment was initiated (see 2 photos to the right).

Cupping was used during Billy's first 2 rehabilitation sessions to reduce tension and trigger points in the muscles of the lumbar region, from approximately T13-L6. Four large RockPod cups were applied with a plunger technique to the bilateral lumbar longissimus muscles with ultrasound gel emollient applied generously to edge of cup rims. The rehabilitation practitioner alternately applied gentle traction with circular rotation of the cup bells for 30 second repetitions. Fasciculations were observed cranial to the cups on the right-side following initiation of rotations and repeated after the rest phase. Upon removal of the cups, following 2 minutes of treatment, palpation revealed reduction in tightness of the epaxial muscles of the lumbar region. Upon removal of the cups at the following session, moderate tension was noted to be further reduced to mild tension.

Billy during cupping and LASER therapy.

Re-evaluation Findings

Over the course of 3 sessions, the rehabilitation practitioner noted improvements in Billy's impairments and functional limitations, including:

- Fully weight bearing through all limbs during standing.
- Independent rising from sitting.
- Reduced stiffness, including improved spinal extension.
- Able to negotiate stairs.
- Able to climb in and out of a raised trampoline bed.
- Able to run and play in the yard.
- Able to trot with reduced knuckling of hind limbs.
- Passive extension of tail perpendicular to ground plane.
- Able to tolerate walks up to 30 minutes.
- In general, Billy's behaviour improved, and his owner noted that he seemed "happier."

Treatment Summary and Patient Response

Modalities	Session 1	Session 2	Session 3	Notes
Massage	x	x	x	Effleurage, palmar rotations, cross friction, skin rolling, compressions, and raking to bilateral epaxials (T1-L7), infraspinatus, supraspinatus, hamstrings and gluteals.
Bowen Therapy	x			Lumbar, midback sequences.
Traction			x	Tail rotations and traction.
Laser (Class IIIb)	x	x		SpectraVet 904-200SP: CW 60s 12J/point; along bilateral dorsal longissimus/epaxials T13-S1.
Mobilizations	x	x	x	Grade I-II dorsoventral and lateral spinal mobilizations; T7-L7 and bilateral cranial/caudal, dorsal/ventral scapulothoracic mobilizations.
Acupressure	x	x		BH/GV20, Bl10, Bl11, Bl13, Bl15, Bl23, GB29/GB30/Bl54, St36, LI4, He6/Pe7, LI11 Ki27, Sp21
Cupping	x	x		Over lumbar trigger points, 2 minutes per point.
ROM/stretches		x	x	Forelimb/hindlimb flexion/extension x3 hold 30 seconds.
Kinesiology taping	x			Y taping to lumbar spine with anchor point over sacrum and extending bilaterally over longissimus dorsi.

CONCLUSION

Cupping, through use of RockPods, can be an effective compressive-decompressive technique complementing traditional manual therapies for symptomatic treatment of pain, trigger point, and generalized muscle tension. It is unknown as to the duration of positive effects of cupping alone or if it can enhance the effects of other modalities such as massage, manual therapy, traction, LASER, or kinesiology tape as