

A Retrospective Study of Forelimb Lameness in Canines from an Osteopathic Viewpoint

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The Team



HPVC

- An integrated and multidisciplinary approach
- Local Vet
- Secondary Referral Centre for Specialist opinion
- *Orthopaedics, Neurology, Cardiology, Oncology, Ophthalmology, Internal Medicine*
- Osteopathy, Homoeopathy, Acupuncture
- Nutrition
- Dog Creche

History

- 15 years of weekly Osteopathic clinics
- Vast array of conditions
- Multidisciplinary approach



Lameness

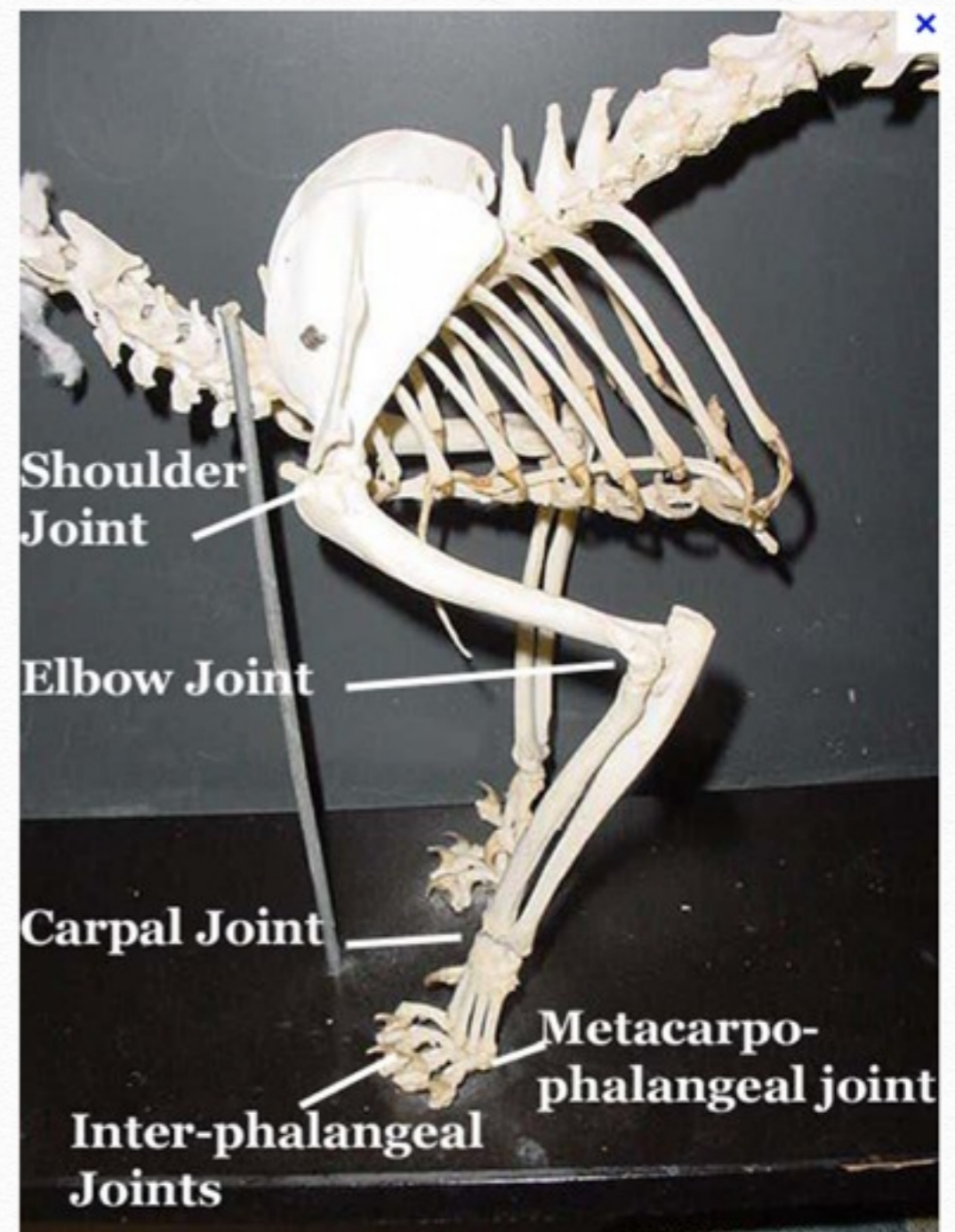
- Definition: the incapability of normal locomotion and deviation from normal gait due to pain in a limb or supporting structure, contracture of the joint musculature, anatomical deformities or shortness of one limb.
- Shortened stride and altered weight bearing
- Quadrupeds: unlike in humans, any C/T or upper T spine dysfunction causes lameness

The Canine Forelimb

Veterinary orthopaedic diagnosis centres on visible and identifiable pathology

Most common conditions affecting the forelimb

- Osteochondritis Dessicans (OCD)
- Degenerative Joint Disease (DJD)
- Osteosarcoma in proximal humerus
- Medial Shoulder Instability(MSI)
- Bicipital Tenosynovitis/bursitis
- Supraspinatus insertionopathy
- Infraspinatus muscle contracture
- Medial Epicondylar bone spurs



Osteopathic Approach

- Osteopathic Diagnosis: The Pathological Sieve
- *Aetiology, Pathology, Predisposing factors, Compensatory Mechanisms*
- Osteopathic treatment addresses:
 - *Local tissue changes*
 - *Joint dysfunction*
 - *Learnt compensatory patterns*
 - *Appropriate techniques*

Management

- Advice
 - *rest or exercise*
- Medication
 - *Allopathic\homeopathic\nutraceutical*
 - *Acupuncture*
- Rehabilitation
 - Hydrotherapy

Methodology

- Data sheet of 400 dogs seen: 74 forelimb lameness
- Breed, age, sex, onset, presenting joint, Veterinary tests, Osteopathic findings
- Breed specific pathology
- Groupings: size, stance, gait, behaviour
- *Gender and age not documented but great relevance in clinical assessment*
- *Specific joint or soft tissue pathologies not itemised but influenced treatment*

Results

Response to osteopathic treatment

- **28 Acute:** 1-3 treatments at weekly intervals. Owners report a positive response (good relief of pain, improved mobility, normal gait)
- **29 Chronic:** 2-3 treatments at weekly intervals, then management at monthly intervals. Owners report improvement in mobility (still altered gait) with some deterioration before next appointment
- **16 Episodic/intermittent:** 1-2 treatments as required (within months or years). Total resolution between episodes

Table 1

Breed	Shoulder	No. X-rayed	Elbow	No. X-rayed	Carpus	No. X-rayed	Nonspecific	No. X-rayed
Labrador	5	0	11	6	1	1	1	0
Retriever	0	0	3	3	0	0	2	0
Large	5	0	1	1	0	0	3	1 (Tsp)
Lurcher	6	1 (NAD)	1	1	0	0	0	0
CKCS	4	1 (Tsp)	0	0	1	0	3	1 (Tsp)
Staff/Bull	4	1 (Tsp)	1	1	0	0	3	2 (Tsp)
Terrier	6	1 (NAD)	1	0	0	0	1	0
Working	2	1 (G/H)	1	0	1	1	2	1 (Tsp)
Min/Toy	1	1 (C/Tsp)	1	1	0	0	3	1 (C/Tsp)
TOTAL	33	6	20	13	3	2	18	6

Table 1: Overview of correlation between breed, forelimb joint and x-rays taken
For convenience: Breed grouping according to similarity of size, stance and gait patterns.
Large = Bernese Mountain Dog, Ridgeback, Weimaraner, Giant Schnauzer, Spinoni, German Shepherd Dog.
Lurcher = Greyhound, Saluki, Whippet, Crosses.
CKCS = Cavalier King Charles Spaniel.
Terrier = Border, Jack Russell, Crosses.
Staff/Bull = Staffordshire Bull Terrier, Min. Bull Terrier, English Bulldog, French Bulldog, Crosses.
Working = Collie, Beagle, Polish Sheepdog, English Springer, Crosses.
Min/Toy = Lhaso Apso, Bichon Frisee, Pekinese, Chihuahua.

The column entitled 'nonspecific' refers to those cases with no definitive joint diagnosis.

Key Findings From Table 1

- Expected correlation between breed group and prevalent joint pathology
- Labradors/retrievers: prone to OCD in elbows
- Cavalier KC spaniels: high incidence cervical spondylitis
- Bull Dogs and Pugs: hemivertebrae in T spine
- **X-rays of the presenting joint and the CT spine were taken when clinically indicated**

Table 2

	No.	NAD G/H Jt	OCD	OA	C/T & <u>Tsp</u> Changes
X-Rayed Shoulders	6	5	1	0	3
X-Rayed Elbows	13	0	10	3	0
X-Rayed Carpi	2	0	0	2	0
X-Rayed Nonspecific	6	0	0	0	6

Table 2: Radiographic findings

Abbreviations: NAD=No abnormality detected, G/Jt=glenohumeral joint, OCD=osteochondrosis dessicans, OA=osteoarthritis, C/T=cervicothoracic, Tsp=thoracic spine.

Key Findings From Table 2

- *X-rays confirmed breed pathology tendencies:*
- 6 of 33 shoulders were x-rayed - 5 NAD and 1 mild OCD. 3 of these 6 x-rays also show degenerative changes in the CT and upper thoracic spine
- 13 of 20 elbows were x-rayed - 10 OCD and 3 OA
- 2 of 3 carpi were x-rayed - both with OA
- 6 of 18 nonspecific cases were x-rayed - all showing varying degrees of CT and upper thoracic spine changes

Osteopathic Assessment

- Observation
- Palpation - monitors tissue health and response
- Clinical examination
- Individual symptom pattern



- Temperament
- Constitution

Osteopathic Findings

- Osteopathic somatic dysfunction
 - “Protection becomes Prevention”*
- Muscle hypertonicity
- Decreased segmental mobility upper/mid thoracic spine
- Global ipsilateral or contralateral fascial tethering
- Scapulo-thoracic dyskinesia

Non-specific Lameness

- No peripheral joint or soft tissue pathology detected
- May be pathological changes in the cervico-thoracic or upper thoracic spine not evident on X-ray
- Local pain and sensitivity, muscle tightness, fascial binding
- Decreased range and quality of movement between T2-5
- Omothoracic synsarcosis (muscular joint) dysfunction
- Palpable peripheral joint restriction due to radial/humeral shift/torsional patterns

Discussion

- Treatment is case specific NOT prescriptive
- Palpation
- Dysfunctional kinetic patterns must be addressed
- Techniques:
 - practitioner preference*
 - patient size, temperament and constitution*

Conclusion

- Osteopathic contribution to Veterinary medicine
- Reaffirmation of Osteopathic Principles
- There is an obvious paucity of publications
- Vast scope for further studies and research

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Thank you for listening!

