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# Sacro Occipital Technique: Palpating occipital fibres on animals. A pilot study.

Jean E. Thompson, Heidi Bockhold, and Charles L. Blum

Introduction: Sacro occipital technique (SOT) uses occipital fibre analysis and treatment (OFT) to find regions of the body that have interrelationships through direct musculoskeletal and/or indirect reflex to the occipital region, spinal segments, and possibly to visceral referred pain pathways used with chiropractic manipulative reflex technique (CMRT). The purpose of this pilot study was to determine if experienced SOT doctors could palpate occipital fibres on canines and if it could be determined that certain fibres were more prominent on one side or the other.

Methods and Intervention: Three canines occipital fibres were palpated by 11 experienced SOT doctors that had no knowledge of each dog. The doctor would palpate subject one, two, and three without anyone else in the room, except for the canine's owner and the doctor gathering answers to survey questions.

Results: All doctors in this study reported that they could palpate occipital fibres on the three canines, however the number of fibres palpated was inconsistent, with the number 7 being the most common finding (6 of 11 doctors).

Conclusion: This study is the first attempt to demonstrate palpable occipital fibres on a canine. Future study is needed to better address the questions asked as well as determine how to gain clearer data. Since there have been no other studies to date published on the palpation of OFT in animals, this pilot study is an important first step.

Indexing Terms: Sacro Occipital Technique, SOT; Chiropractic; Occipital fibres; palpation; reliability; validity.

## Introduction

Sacro occipital technique (SOT) has various assessment tools to develop pre- and post-treatment diagnostic methods. (1) One method developed by the technique's developer, Major Bertrand DeJarnette, is called *occipital fibre analysis and treatment* (OFT), (2) which is a method within SOT used to analyse and treat thoracic, lumbar, and sacral segments. The rational for using OFT is to find regions of the body that have some interrelationships through direct musculoskeletal, and indirect reflex, to the occipital region, spine, and possibly to visceral referred pain pathways.

*'... This study is a first attempt to palpate occipital fibres on a canine. The results point to 'better questions' and suggest there is value in this approach to the care of animals ...'*

According to SOT protocols, visceral referred pain pathways, both viscerosomatic and somatovisceral, are assessed with OFT to help determine which vertebral level should receive chiropractic manipulative reflex technique (CMRT). (3)

CMRT was originally called *Bloodless Surgery*, a method taught by DeJarnette since 1939, (4) developed over the years, until modified to utilise occipital fibres and then he changed the methodology to be called chiropractic manipulative reflex technique (CMRT). (5) CMRT is used as a method of treating the spine or vertebral visceral syndromes associated with viscerosomatic or somatovisceral reflexes, (6, 7, 8) dysafferentation at the spinal joint complex, (9) and visceral mimicry type somatic relationships. (10)

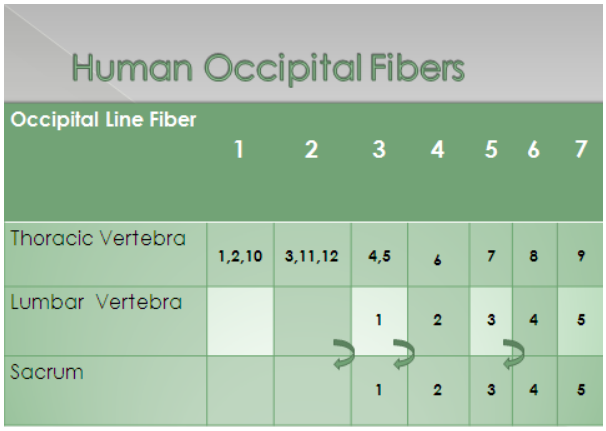
Treatment involves location and analysis of an affected vertebra in a reflex arc by way of occipital fibre muscular palpation, similar to trigger point analysis or Dvorak and Dvorak's spondylogenic reflex syndromes. (11) Once specific vertebra reflex arcs are located, corroborated with referred pain pathways, and clinical symptomatology, then the specific vertebra to be treated is isolated by pain provocation, muscle tension, and vasomotor symptomatology. Often times if a vertebral dysfunction is chronic or unresponsive to chiropractic spinal manipulation then a viscerosomatic or somatovisceral component is evaluated. (12)

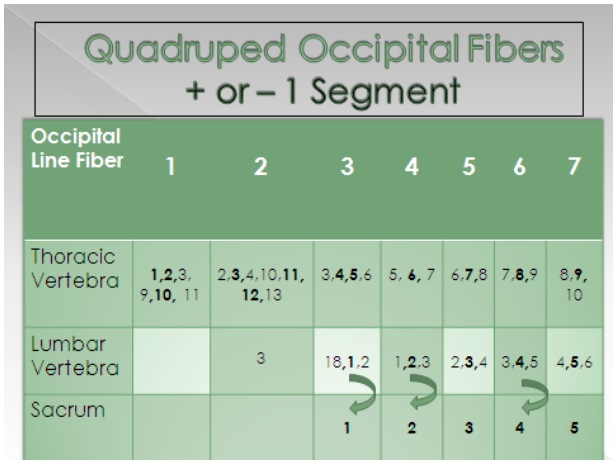
CMRT involves using OFT to assess vertebra involvement, reflex viscerosomatic regions are assessed along with patient history and sometimes laboratory analysis to determine the primary organ or system involved. Then using CMRT protocols the patient is treated with for chronic vertebral imbalance secondary to visceral disorders or viscerosomatic dysfunctions, using chiropractic manipulative procedures, soft tissue reflex techniques, visceral manipulation, and dietary or nutritional modifications, as indicated. (3)

While CMRT protocols need more reliability and validity study, the palpation for pain in humans does help its reliability since palpation for pain alone has been shown to have reliability. With animals, veterinarians and their owners purport that each species has cues to inform the practitioner whether a region or location of palpation is uncomfortable or not. The phenomena of understanding when an animal is in pain or finds a region touched sensitive, warrants further study. (13, 14) While with humans a patient clinical history is taken to guide any possible diagnosis, with animals this is reliant upon the veterinarian or owner. Lastly laboratory tests can be used to further help hone in on where treatment needs to be focused.

CMRT is developing an evidence base of literature for the treatment of humans (15 … 42) and recently also for animals (canines and equines). (43, 44, 45, 46) The palpation of occipital fibres is an important aspect of CMRT, both as an assessment tool as well as to rule out residual subclinical findings, even with symptom improvement. Since OFT has not been studied in quadrupeds it is unclear if the occipital fibres are based only on bipedal spinal righting reflexes.

In bipedal humans the rational for OFT rests upon visual and vestibular righting mechanisms, which occur as a method of accommodation to keep the head upright and parallel to the horizon. (47, 48) Of interest is whether these reflexes could be found in quadrupeds and if these reflexes were similar to what has been found clinically in bipeds. (49, 50) There does seem to be some similarity between upper cervical joint positions in bipeds and quadrupeds since '*when at rest both bipeds and quadrupeds hold the atlanto-occipital articulation and the upper cervical joints (C1/C2, C2/C3) in a flexed attitude*'. (51)






The purpose of this pilot study was to determine if experienced SOT doctors could palpate occipital fibres on canines and if certain fibres were determine to be more prominent on one side or the other.

## Methods and Intervention

With cooperation from the canines' owner, who consented and was present during this study, three canine subjects were included in this study. The canines were in no distress and their body language suggested they enjoyed the experience of having the back of their heads gently palpated. Each canine was palpated by 11 experienced SOT doctors that had no knowledge of each dog.

The doctor would palpate subject one, two, and three without anyone else in the room except for the canine's owner and the doctor gathering data. During the canine palpation and data collection there was no discussion so as not to influence the testing doctor's findings. The doctors in the study were asked to not discuss the study or what they found during palpation with anyone, while the test was underway.

Following palpation of a canine subject the doctor was asked to complete a survey that asked the following questions:

1. Can you palpate occipital fibres on this animal?
2. How many occipital fibres were you able to palpate on each side of the canine's suboccipital region?
3. Of the fibres you may have noted which one(s) were most prominent and which side?

## Results

The years of experience as cChiropractors practicing SOT varied from the most at 59 years to the least at 14 years, an average of 28 years. All doctors in this study reported that they could palpate occipital fibres on the three canines, however the number of fibres palpated was inconsistent, with the number 7 being the most common finding [6 of 11 doctors]. However no clear consensus was found regarding how many occipital fibres were palpable and which side or fibre was most prominent. See Tables 1.1 (Canine 1), 1.2 (Canine 2), 1.3 (Canine 3).

## Discussion

It appears from this study that occipital fibres can be palpated on a canine. However there was not much consistency on how many fibres each doctor could palpate on each side or which side or fibre was most prominent.

The doctors in the study did note that the question regarding how many fibres were palpated may have been confusing. This could be rectified in future study question being clearer about whether the question was asking for '*total*' fibres or '*active*' fibres.

Future studies may be more productive if doctors in the study have greater experience palpating occipital fibres in canines, this may particularly important since not one of the doctors in this study had previously attempted to palpate occipital fibres on a canine. Also it possible that the palpation of a canine's suboccipital myofascial region may change from doctor to doctor so that having a static occipital fibre condition may not be a reasonable expectation. Even though occipital fibres have been studied in humans (52, 53, 54) most of the research is in the preliminary stages so interexaminer reliability occipital fibres in humans (as well as in animals) will need further study.

**Table 1.1** Canine 1 - OFT palpation findings

| Doctor | Years of SOT Experience | **Canine #1** | | |
|---|---|---|---|---|
| | | # Fibers Palpated | Side of Prominence | Prominent Fibers |
| 1 | 30+ | 6 | Left | 3L,6L |
| 2 | 25 | 1 | Left | 7L |
| 3 | 30 | 7 | Both | 2B,6B |
| 4 | 25+ | 7 | Both | 2R,5B |
| 5 | 16 | 5 | None | None |
| 6 | 19 | 3 | Left | 1L,4L,5L |
| 7 | 59 | 7 | Left | 6L |
| 8 | 25 | 3 | Right | 4-6R |
| 9 | 14 | 7 | Left | 7L,1R |
| 10 | 25 | 7 | Left | 5L |
| 11 | 33 | 7 | Both | 6B |

**Table 1.2** Canine 2 - OFT palpation findings

| Doctor | Years of SOT Experience | **Canine #2** | | |
|---|---|---|---|---|
| | | # Fibers Palpated | Side of Prominence | Prominent Fibers |
| 1 | 30+ | 6 | Right | 3,4,5 |
| 2 | 25 | 3 | Both | 2,L,6L,2R |
| 3 | 30 | 7 | Both | 2r,3L,4L |
| 4 | 25+ | 7 | Right | 6,4,3,2 |
| 5 | 16 | 5 | Right | 4R |
| 6 | 19 | 4 | Left | 2-5L |
| 7 | 59 | 7 | Both | 2R,4L |
| 8 | 25 | 4 | Both | 4-5R,5-6L |
| 9 | 14 | 7 | Both | 6-7R,2L |
| 10 | 25 | 7 | Left | 4L |
| 11 | 33 | 7 | Left | 6L |

**Table 1.3** Canine 3 - OFT palpation findings

| Doctor | Years of SOT Experience | Canine #3 | | |
|---|---|---|---|---|
| | | # Fibers Palpated | Side of Prominence | Prominent Fibers |
| 1 | 33 | 7 | Left | 3L |
| 2 | 25 | 1 | Right | 4R |
| 3 | 30 | 3 | Both | 3R,7B |
| 4 | 28 | 7 | Right | 4R,2R |
| 5 | 16 | 3 | Left | 2L |
| 6 | 19 | 3 | Both | 2R,3B,6B |
| 7 | 59 | 7 | Right | 5R |
| 8 | 25 | 6 | Both | 3-6R,4-5L |
| 9 | 14 | 7 | Both | 4R,3L |
| 10 | 25 | 7 | Rigth | 6R |
| 11 | 33 | 7 | Both | 5B |

## Conclusion

This study was a first attempt to palpate occipital fibres on a canine. While all doctors in the study determined they could palpate occipital fibres in all three canine subjects it is unclear if the doctors had a preconceived expectation that occipital fibres would be present.

More investigation is needed to better address the questions asked as well as to determine how to gain clearer data. Since there have been no other studies to date published on the palpation of OFT in animals, this pilot study was an important first step.

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## *About the practitioners*

Dr Thompson has over 18 years experience in comprehensive chiropractic care for pain management, chronic neck and low back pain, TMJ, extremity disorders, nutrition, and general wellness. She has been in private practice in Maryland since 2003 and had a thriving practice in Lakewood, Colorado for five years prior. D. Thompson uses the 'whole person' approach to healing and chiropractic care with the goal being long-term pain relief. Her technique of choice is SOT (Sacro Occipital Technique), a specific chiropractic technique designed to reduce or eliminate pain or disorders in the craniospinal, TMJ, head, neck, back and pelvis, extremities (foot, ankle, knee, and hip as well as hand, wrist, elbow, and shoulder) and in specific cases improve organ function.

Dr Thompson frequently coordinates care for her patients with Orthopedists, Neurologists, Massage Therapists, Acupuncturists, and Energy Healers. She is an Advanced Instructor at *Options for Animals College of Animal Chiropractic* and has taught internationally. She is a past instructor of Anatomy and Physiology at the *Massage Institute of Maryland* and *Colorado School of Healing Arts*.

Dr. Heidi Bockhold is a licensed Chiropractor living in the Atlanta Area of Georgia, where she has several paint horses, cattle dogs, and a staffordshire terrier. Dr. Bockhold received her Doctor of Chiropractic Degree from Life University in Marietta, Georgia in June of 1992. In June of 1994, she received a Bachelor of Science degree in Biology from Regents College in New York. Due to her vast experience and love of animals Dr. Bockhold has treated animals during her entire Chiropractic career. In March, 2000, she was certified in animal chiropractic by the *American Veterinary Chiropractic Association* (AVCA) and is also certified internationally by the IVCA. Since that time she has completed the advanced course in animal chiropractic offered at *Options for Animals*. In addition to treating animal patients, in 2000 Dr. Bockhold became an International Instructor for *Options for Animals*. She now co-owns *Options for Animals College of Animal Chiropractic*. In 2003 Dr Bockhold also co-founded the *International College of Animal Chiropractors*.

For the past 12 years Dr Bockhold has been exclusively treating large and small animals with Chiropractic Care. She also teaches animal chiropractic and advanced courses to professionals at *Options for Animals* in Kansas and Internationally in Germany and England. For the past 2 years she and a colleague have been conducting research on treating animals using Sacral Occipital Technique. In addition, she lectures to lay audiences on a wide variety of topics such as Animal Chiropractic, Integrative Animal Health Care, along with Equine and Canine management.

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