Comparison of the effects of HVLA manipulation of the cranio-cervical and thoracic joints on interincisal distance

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1. Introduction

According to neurophysiological theories of somatic dysfunction1 neurological reflexes involving nociceptive and mechanoreceptive pathways from a hypomobile joint may have an influence on sympathetic, pain and motor control pathways of the myelomere.

Described neural interconnections between the first three cervical nerves and the trigeminal nucleus5(Figure 1) could theoretically explain how the cranio-cervical joint (CCJ) could influence temporomandibular joint (TMJ) function4, particularly when palpation reveals clinical signs associated with somatic dysfunction (SD).

Objective: discussion of the theoretical involvement of the trigeminocervical pathways on interincisal distance in comparison the effects of manipulation of CCJ diagnosed with SD, and a thoracic joint diagnosed with SD that does not involve these neurophysiological pathways.

2. Methods (1)

60 students at the Centre Européen d’Enseignement Supérieur de l’Ostéopathie (CEESO) Paris were included after signing a letter of consent. The project was approved by the CEESO Ethics Committee. Subjects were screened for contraindications to vertebral manipulation and were all asymptomatic.

They were randomly assigned to three groups:

- a control group where subjects were asked to lie down and were not manipulated
- a group treated using HVLA manipulation of the CCJ diagnosed with SD,
- a group treated using HVLA manipulation of one thoracic joint from T4 to T12 diagnosed with SD.

The subjects were manipulated by the same pratician.

TMJ function was evaluated by measuring the interincisal distance - the distance in millimetres between the upper and lower central incisors - with a calliper (FACOM Company, France) before and one minute after manipulation. Measurements are performed on the same day in the same room of the Clinique « A mains nues » by a person trained to the measurement with calliper.

2. Methods (2)

The ANOVA test and Dunnett’s post test were used to compare measurements.

3. Results

Initial average interincisal distance was comparable in the three groups (see Figure 3) p=0,7.

<table>
<thead>
<tr>
<th>Group with CCJ manipulation</th>
<th>Group with thoracic joint manipulation</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=20</td>
<td>n=20</td>
<td>n=20</td>
</tr>
<tr>
<td>46,8 mm ±5,75</td>
<td>46,83 mm ±5,77</td>
<td>44,9 mm ± 4,93</td>
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</table>

We observed (see Figure 4):

- a significant increase (+2,05mm; IC95%=[+1.36;+2.74]) in interincisal distance following manipulation of the CCJ diagnosed with SD. (p<0.0001)
- a significant increase (+1.25mm; IC95%=[+0.67;+1.83]) in interincisal distance following manipulation of a thoracic joint diagnosed with SD. (p<0.0001)
- a decreased (-0.85mm; IC 95%=[-0.17; -1.52]) interincisal distance in patients in the control group. (p<0.01)
- no statistical difference between the increases in interincisal distance in the two manipulation groups.

4. Discussion

Manipulation of CCJ and thoracic joint diagnosed with SD had the same short-term impact on interincisal distance. This suggests that the trigeminocervical pathways were not specifically involved in the increase in interincisal distance, contrary to Mansilla-Ferragut and al’s hypothesis which explained the short-term increase in interincisal distance following manipulation of the CCJ observed in their study by the presence of these neurological pathways.

Bretischwerdt and al showed that stretching the hamstring musculature also produced a significant increase in interincisal distance, suggesting that remote effects, like indirect relaxation of the masseter muscle may be obtained by activating descending inhibitory pathways.

In addition to the described mechanical effects of spinal manipulation explaining a gain in range of motion, there may be neurological reflexes involving segmental, but also supra-segmental, medullary pathways. However neurophysiological studies would better describe these post-manipulative mechanisms.

Limitations: our study sample was young, asymptomatic, and was accustomed to being manipulated.

5. Conclusion

Our results suggest that the influence of trigeminocervical pathways on interincisal distance is limited following spinal manipulation, but suprasegmental reflexes such as descending inhibitory pathways may be involved following spinal manipulation. This requires further investigation.

References


Acknowledgements

AB, LF and RZP acknowledge with gratitude the assistance of M. Edouard-Olivier Renard, Dean of CEESO Paris and Lyon, in the development and completion of this project.
1. Introduction

1.1 Influence of the craniocervical area on posture

The proprioceptive input from the upper cervical muscles plays an important role in postural control\(^1\). Experimental studies show that a change in short cervical muscle tone could entail a change of posture\(^2,3\). The large number of spindles in the suboccipital muscles\(^4\) indicates they could act on posture control by reason of their proprioceptive role\(^5,6\).

The inhibitive distraction technique (IDT) used by Briem et al.\(^7\) in their study of spindles in the suboccipital muscles\(^4\) indicates they could act on posture control by reason of their proprioceptive role\(^5,6\).

The inhibitive distraction technique (IDT) used by Briem et al.\(^7\) in their study of spindles in the suboccipital muscles\(^4\) indicates they could act on posture control by reason of their proprioceptive role\(^5,6\).

1.2 Influence of water on musculoskeletal tissues

Water could reduce muscle tone\(^9\), therefore we suggest the effect of the IDT in the pool group. The same technique would have more impact in short-term when carried out in a heated pool. Immersion of the subjects in a heated pool could reduce muscle tone\(^9\), therefore we suggest the effect of the IDT on suboccipital muscle increases when carried out in water.

1.3 Hypotheses

The objective of this study was to determine whether a manual technique, the IDT (see Figures 2 and 7) on the craniocervical junction, could exert a remote influence on postural control when patients were on the plinth and in water.

2. Material and Methods

2.1 Study design

The project was accepted by the CEESO ethics committee. 60 asymptomatic subjects (39 men, 41 women) of mean age 38 (+/- 13 years), were recruited and randomly divided into four equal groups:

- Study Technique on Plinth;
- Sham Technique on Plinth;
- Study Technique in Water;
- Sham Technique in Water.

2.2 Technique used

IDT in order to decrease suboccipital muscles tone.

2.3 Description of the IDT performed in the pool

In the pool, subjects were floating on their back using floats (see Figure 3).

2.4 Outcome measure

Picture taking\(^10\) (see Figure 4)

We used data capture and imaging software (Solid Edge, Siemens). The obtained gains in ARSSBM were measured by the angle between the line through the ear mark and the line through the PSIS mark. The difference in degrees pre- and post-technique for the global side-bending motion was calculated through an Excel (Microsoft; Richmond, USA) spreadsheet.

2.5 Statistical analysis

All data were collected and exported to the software Graphpad Prism\(^5\) 5.0 (Graphpad Software, Inc., La Jolla, USA) for statistical analysis. A one-way ANOVA test was used to compare the differences in range of motion between the four groups, and a Turkey test was used for all pairwise comparisons.

3. Results

3.1 Variations in the active post technique amplitude in each group

The mean gains in ARSSBM, pre to post technique, are the following (see Figure 5):

- Study Technique on Plinth: +10.7° (CI 95% +8.1 to +13.2°);
- Sham Technique on Plinth: +20.7° (CI 95% +16.4 to +24.9°);
- Study Technique in Water: +1.0° (CI 95% +0.9 to +2.1°);
- Sham Technique in Water: +1.2° (CI 95% +0.9 to +2.1°).

3.2 Comparison of the variations between each group

We observed a statistically significant difference when comparing study technique versus sham technique (see Figure 6):

- On the plinth groups (gain = +9.7°; 95% CI +4.8° to +14.5°).
- In the pool groups (gain = +19.5°; 95% CI +14.6° to +24.3°).

The mean gain obtained in the IDT pool group was significantly higher than in the plinth group. The same technique would have more impact in short-term when carried out in a heated pool. Immersion of the subjects in a heated pool could reduce muscle tone, therefore we suggest the effect of the IDT on suboccipital muscle increases when carried out in water.

3.3 Comparison of the IDT performed in water versus on the plinth in the active range of spine side bending motion

Table 1: Differences between each group

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4. Discussion

The IDT resulted in a short-term increase in ARSSBM for subjects in both the pool and plinth groups suggesting that suboccipital muscles relaxation was associated with a short-term increase in active cervical side-bending. This same technique was used by Briem et al.\(^7\) on patients with cervicalgia. It did not have an influence on spinal active range of motion, however the study only assessed the cervical portion as opposed to the entire spine as in our study.

McFarland et al.\(^11\) highlighted that a decrease in the proprioceptive input from suboccipital muscles would cause difficulties in maintaining postural balance. Our results suggest that a change in suboccipital muscle tone could influence postural spinal muscle tone.

The mean gain obtained in the IDT pool group was significantly higher than in the plinth group. The same technique would have more impact in short-term when carried out in a heated pool. Immersion of the subjects in a heated pool could reduce muscle tone, therefore we suggest the effect of the IDT on suboccipital muscle increases when carried out in water.

4.1 Limits

Evaluation of the IDT during a short-term period only and with only one biomechanical parameter (active side bending).

5. Conclusion

Our results suggest that a manual technique, the IDT on the craniocervical junction, may have a remote influence in short-term on ARSSBM. We attributed this influence on the postural musculature of the spine to the suboccipital muscles according to their described proprioceptive role.

We also highlighted the clinical relevance of using hydrotherapy pools to improve muscular relaxation. It would be interesting to carry out further research into the performance of osteopathic techniques in heated pools, notably to evaluate long-term effects of this approach.

References

Influence of the French decrees on the use of two restricted and one forbidden techniques. A questionnaire analysis among DO MROF osteopaths.

1. Introduction

March 4, 2002: a French law has legalized the professional title of osteopath1. March 25, 2007: the French decrees were published to regulate the osteopathic practice and training2,3. These decrees define which professionals are authorized to get the title of osteopath: physicians, ancillary medical personnel and exclusive osteopaths. These three categories of osteopaths have their own regulations about their practices. For the exclusive osteopaths, the use of manipulations of cervical spine and of infants under 6 months were authorized only after getting a medical certificate of no contraindication4. These two techniques were described as “manipulations” without providing any definition. The internal pelvic techniques were strictly forbidden5.

2010: According to the World Health Organization Benchmarks of Training in Osteopathy, no technique is forbidden or submitted to the production of a medical certificate of no contraindication6.

The aim of this study was to observe if these restrictions have had an influence on the use of these three techniques by the exclusive osteopaths.

2. Methods

The project was approved by the CEESO Ethics Committee.

Study population
One of the largest association of exclusive osteopaths in France is called “Registre des Ostéopathes de France (ROF)”. Its 1065 members (DO MROF osteopaths) were the study population.

The questionnaire
- 10 questions divided into 2 parts to define the study sample and to describe the evolution of use of the three regulated techniques after the publication of the decrees.
- piloted by 3 DO MROF osteopaths and the questions were modified.
- sent to all DO MROF osteopaths who provided an email address to the ROF (n = 600) from 02.20.2010 to 03.08.2010.

Data collection and statistical analysis
All data were collected and exported to the software Graphpad Prism® 5.0 (Graphpad Software, Inc., La Jolla, USA) for statistical analysis. The Chi-Square Test of Independence was used for qualitative data analysis, and α was set at 0.05.

3. Results

We collected 141 responses (24% response rate): 19 were incomplete and 122 were analysed. Our sample was not representative of DO MROF osteopaths.

We observed:
- a non significative difference between the frequencies of use of the manipulations of cervical spine before and after the decrees (see Figure 1).
- a non significative difference between the frequencies of use of the manipulations of infants under 6 months before and after the decrees (see Figure 2).
- a significative difference (p<0,01) between the frequencies of use of the internal pelvic techniques before and after the publication of the decrees (see Figure 3).

4. Discussion

The response rate of DO MROF osteopaths was lower than the response rate of the studies among Australian osteopaths7,8 and among English ones9. However, our questionnaire could have been interpreted as a way to know, if the legislation was respected and so could explain the low response rate.

According to the World Health Organization Benchmarks of Training in Osteopathy, the full-time training programme to become an osteopath would take 4200 hours10. The French regulation authorized the practitioners to use the professional title of osteopath after 2650 training hours11. This inadequate training might explain the existence of restricted and forbidden techniques in France. In Australia, the full-time training to become an osteopath lasts five years and allows them to practice all described manual techniques without restriction12. The restrictions of the use of some manual techniques might be linked to the duration of the training programme to limit their risks.

The French regulation doesn’t appear effective in our sample concerning the use of the techniques which require a medical certificate of no contraindication. This could be explained by the absence of a “manipulation” definition in the decrees which may have caused confusions for DO MROF respondents. The use of accepted terminology such as the Authorized Osteopathic Thesaurus13 might help osteopaths to understand what is really restricted.

A lot of techniques are described in osteopathy to treat the somatic dysfunctions2. However, the Australian osteopaths as the British ones use mainly Soft Tissue Technique and Articulatory Techniques2,3. This point suggests that the osteopaths use a limited number of techniques. We observed that there is not significant changes about the use of the restricted techniques in our sample. This might be explained by the low level of use of these techniques by DO MROF osteopaths before the publication of the decrees.

Our results suggest that a law can influence the use of techniques if they are strictly forbidden and correctly defined. This should warn foreign osteopaths during the legislation process with their governments.

Limits
Our sample was “representative, so it is not possible to extrapolate the results of our study to all DO MROF osteopaths and to all exclusive osteopaths.

5. Conclusion

The French decrees have decreased the use of the internal pelvic techniques by DO MROF osteopaths respondents. Nevertheless, the influence was not significant concerning the use of the techniques which now request a medical certificate of no contraindication.

In countries where osteopathy is currently regulated, the osteopaths should be aware of a possible negative influence of their coming legislation if they want all described osteopathic techniques to be used in the future.

References

Figure 1. Comparison of the frequencies of use of manipulations of the cervical spine before and after the publication of the French decrees by the DO MROF osteopaths respondents (n = 122) on March 8, 2010

Figure 2. Comparison of the frequencies of use of manipulations of infants under 6 months before and after the publication of the French decrees by the DO MROF osteopaths respondents (n = 122) on March 8, 2010

Figure 3. Comparison of the frequencies of use of the internal pelvic techniques before and after the publication of the French decrees by the DO MROF osteopaths respondents (n = 122) on March 8, 2010
1. Introduction

- Chronic low back pain: Low back pain (LBP) persisting for more than three months; this is the most frequent reason for visits to DOs.
- Epidemiology: 60 to 80% of the industrialized countries population would be affected during his life. 85% of these cases are non specific or functional causes, defined as common low back pain.

2. Methods

- 4 biomedical databases were searched: PubMed, Cochrane, Embase, Cinahl.

3. Results

- Considering a meta-analysis led through 6 randomized clinical trials, OMT would significantly decrease chronic low back pain (the effect size is -0.30 with CI 95% = [-0.47, -0.13]). Nevertheless, according to the four clinical trials selected for the review, the reduction of the symptomatology in chronic low back pain with OMT wouldn't be significant compared to standard care, phytotherapy or exercise group. There is a significant difference with sham manipulation (p<0.01). There is a discontinuation of the use of co-treatments (p=0.03) and an increase of the well being of the patient (p=0.04) with OMT.
- DOs have mainly focused on three aspects of osteopathic care for patients suffering from chronic LBP.

4. Discussion

- Few articles were published about osteopathic care and chronic LBP comparing to other manual therapies (15 articles indexed in Pubmed for osteopathy versus 584 for physiotherapy, 125 for acupuncture and 85 for chiropractic treatment with the same dates limits applied).

5. Conclusion

- The actual distinctiveness of osteopathic care described in the scientific literature seems to be the concept of somatic dysfunction.

Acknowledgments

ASH, RZP and GK acknowledge with gratitude the assistance of M. Edouard-Olivier Renard, Dean of CEESO Paris and Lyon, in the development and completion of this project.
Osteopathic care of a patient with gall stones: a retrospective case study
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3 Head of student dissertation, CEESO Paris [md@deseo.com] ; 4 Head of Research, CEESO Paris & Lyon.

1. Introduction

Gall stones disease has a high prevalence in developed countries, ranging from 5.9 to 21.9%. [1] A study in the UK [2] showed that on 856 subjects, 58% of the patients who initially had mild symptoms and 52% of those with severe symptoms did not experience further episodes of pain during the follow up, ten years later. It has been suggested that a “wait and see” therapeutic strategy could represent an appropriate approach in the management of gallstones.

Controversy about treatment [3]: conservative or surgical approach for acute and chronic cholecystitis [2, 4], seems to be up for grabs to the individual willing to deal with this problem [1]. Most common treatment is emergency cholecystectomy [5].

Alternative treatments: anecdotal evidence of nutritional-based therapies as an alternative to surgery [6]. There are no randomized clinical studies of any manual therapy management of cholecystitis.

2. Clinical Features

Patient was a 59-year old overweight Caucasian male (Body Mass Index : 32).

Occupation: higher executive in a large company with a sedentary lifestyle.

Diet: high protein, high fiber; eating at least five times a week.

Diagnosed with Acute cholecystitis by ultrasonography by the attending surgeon of the emergency department (Gall bladder lithiasis, with multiple sand-like stones), who recommended immediate cholesystectomy. As the patient refused to undergo the surgical procedure and discharged himself from the hospital, the patient sought alternative care the same day.

He presented to an osteopathic practice with acute right upper quadrant pain, nausea and anorexia. The onset had occurred in the middle of the previous night, waking him up repeatedly up to 5 times. 

The patient reported a VAS=9/10, relieved slightly with self-prescribed analgesics and anti-spasmodics.

The patient had never known such pain before, even though he admitted he had felt some upper right quadrant abdominal pain following large meals over the previous months.

Past history: the patient had been gaining weight over the previous 18 months. No significant history. Systems review did not reveal any significant information.

Osteopathic examination and treatment data were recorded with the «Osteopathic Outpatient SOAP Note Form» [7].

References


3.1 Diagnosis

First consultation
Palpation revealed signs that we associated with severe somatic dysfunction (SD) found in thoracic spine, ribs, viscera, right shoulder complex. Less severe SDs were found in neck, lower thoracic spine, lumbar. The examination of the abdomen was extremely painful to touch (see Figure 1).

3.2 Intervention

The osteopathic examination revealed signs that were attributed to SDs, which by definition are amenable to manipulative treatment. Contra-indications to osteopathic care were considered relative according to the natural evo- lution of the disease, the presence of SDs and the patient’s consent for this non-surgical approach. In these rare cir- cumstances, it is the osteopathic practitioners that the patient conserva- tively and required daily contact to monitor progress and prevent any complications.

The practitioner chose to intervene on two factors: treatment with osteopathic manipulative treatment (OMT) of SDs that we hypothesized were influencing and/or main- taining the acute symptoms and specific dietary recom- mendations, including the «gall bladder flush» [6].

Osteopathic treatment
The following SDs were treated, as they were the most se- vere and seemed directly linked to the patient’s condition (see Figure 1).

The practitioner suggested the «gall bladder flush» [6, 9] as a dietary recommendation adapted to the patient’s condition, his current acute symptoms and his lifestyle.

Specific advice was given on the first consultation, to help him deal with acute pain and associated immediate stress repercussion on his neuromusculoskeletal system (ie breathing exercises and relaxation methods).

3.3 Intervention Follow-up

Second consultation
Osteopathic examination
One week after the initial consultation and following the gall bladder flush, the patient’s VAS was down to 0/10. We observed and found the SDs were less severe and mostly milder in their intensity (VAS=7/10).

The patient reported relief of VAS=0/10, relieved slightly with self-prescribed analgesics and anti-spasmodics.

The ethical issue was taken into account by the osteopathic practitioner during the second consultation. The patient consented for this non-surgical approach. In these rare cir- cumstances, it is the osteopathic practitioners that the patient conserva- tively and required daily contact to monitor progress and prevent any complications.

This case of a patient seeking alternative care from an osteopathic practice, several SDs and dietary recommendations were made.

3.4 Discussion

Follow-up phone call (10 days after initial consultation): Patient resumed a normal life and returned to work.

Outcome Follow-up phone call (10 days after initial consultation): Patient resumed a normal life and returned to work. Outcome: control of cold sensation: micro lithiasis in gall bladder.

No other signs. Attending consultant: no need for surgery.

4.2 Discussion

Osteopathic practitioners see mainly patients with muscu- loskeletal complaints (7%) of patients according to GOOC snapshot 2001 [11]; acute non-musculoskeletal presentations are very rare (<1%). Osteopaths can treat these pa- tients, when they diagnose SDs which may be in anatom- and/or physiological links with the presenting com- plaint. These links are described in the World Health Organisation Benchmarks [12]. A descriptive study among patients with diabetes mellitus revealed that patients with this condition had a higher frequency of osteopathic referral findings [13] suggesting that OMT could be appropriate to help pa- tients with nonmusculoskeletal conditions.

The osteopathic practitioner based their treatment reasoning on different structure-function models [12]. The biome- chanical, histophysiological and the neuropathological. OMT was used to reduce mechanical stresses, balance neu- ral inputs, reduce or eliminate nociceptive drive and ad- dress the repercussions of biopsychosocial stresses on the neuromusculoskeletal system. OMT techniques used and adapted to this patient’s acute pain (myofascial release, muscle inhibition and lymphatic techniques) were similar to some proposed in the Multicenter Osteopathic Pneu- monia Study in the Elderly (MOPSE) manipulation pro- tocol [14]. This suggests that somatovisceral and visceralo- somato-neurological reflex activities could be influenced more specifically with some OMT techniques in patients with acute conditions.

Use of naturopathic «Gall Bladder Flush»
Controversial: anecdotal evidence only with different vari- ations according to local folk. However, pain management and lifestyle changes seem to be a good way of dealing with mild symptomatology [2]. On follow-up consultations, other lifestyle changes would include long-term changes to the diet, including lowering refined sugar, caffeine and chocolate rich foods, addressing the main risk factors to developing gall bladder disease [6, 15].

Limits of this study
Retrospective case study: some data missing.
Impossible to discuss and differentiate the influence of naturopathic diet, osteopathic care and the natu- ral evolution.

4.1 Discussion

The patient actively looked for alternative treatment, how- ever consent for this was not required. According to the General Osteopathic Council (GOOC) ethical recommendations [10], the practitioner took time to fully explain the risks in not undertaking the surgery, including the current controversy about active or passive treatment [3] in order to have the patient’s specific, fully informed consent before commenc- ing treatment.

The ethical issue was taken into account by the osteopathic practitioner while carefully evaluating the risk of potential complications, assessing whether manual treatment was appropriate, adopting techniques to patient’s acute pain and a daily monitoring to prevent any complications.

4. Conclusion

Risk assessment is of primordial importance when osteopathic practitioners are selected to treat non-musculoskeletal presentations, especially for acute condi- tions. Absolute contra-indications should be ruled out care- fully and the patient monitored closely to prevent any com- plications.

This case study suggests that osteopathic care may have helped this patient suffering from acute cholecystitis and experienced moderate pain.

This case of a patient seeking alternative care from an os- teopathic highlighted the necessity to base osteopathic clini- cal reasoning on evidence-informed practice in order to de- scribe more precisely our scope of practice.
The use of European training programme frameworks for French professional certification in osteopathy.

Krief Guillaume DO, MEd 1, 2, Levasseur Marc MEd 3, Zegarra-Parodi Rafael DO, MEd, PG Dip 4, 5

1. Introduction

The law currently permits disparities in osteopathic training and in the frameworks for the professional practice of osteopathy in France. This is detrimental to students who do not have access to nationally standardized professional practices and competencies.

The French national commission of professional certification, the “Commission Nationale de la Certification Professionnelle” (CNCP) lists and evaluates educational institutions that award professional qualifications or provide professional titles in France. At its request, an expert report on osteopathic training and professionalisation in the context of European health care was produced by Sterlingt, president of the French syndicate of osteopaths, the “Syndicat Français Des Ostéopathes” (SFDO).

The European Qualifications Framework for Lifelong Learning (EQF) is the reference system designed to harmonize professional training and practice in Europe. By 2012, all certification provided by European establishments of post-secondary level education should bear a reference to an EQF reference level. Despite a context of no existing certification in manual therapies, ten French osteopathic education institutions (OEIs) obtained in January 2011 the highest national level of professional certification (see Table 1). Eight of these ten OEIs made the application jointly, using principally the EQF to produce a description for certification in osteopathy. All eight provide five years’ full time training in accordance with the recommendations of the World Health Organization's Benchmarks for Training in Osteopathy.

The objective of this study is to describe the pedagogical issues in the elaboration of this application and how existing pedagogical processes were modified in accordance with European training frameworks.

2. Methods

The SFDO provided expertise in other professions’ pedagogy and professional training. This helped the eight OEIs to fill in the osteopathic certification dossier taking the specificities of the osteopathic profession into account. The SFDO thus provided the interface between the eight OEIs and the CNCP.

Four annexes to the application were requested: (1) details of past and current activities in osteopathic research at these eight OEIs, (2) details of the effective implementation of Validation of Learning Through Experience ("Validation des Acquis de l’Expérience, VAE"), (3) benchmarking for osteopathic competence and activities, and (4) the eight OEIs’ curricula.

Meetings to identify existing competences and share knowledge were held: the activities of the CEESO Research Department (www.recherche-osteopathie.com) were submitted in this section, primarily to the eight OEIs, which share their expertise. Curricula annex

Regarding the submission of the application to the "Institut des Hautes Études Ostéopathiques" and the "École Supérieure d’Ostéopathie".

3. Results

Fifteen meetings were finally necessary and took place over 2009 and 2010. VAE annex: the “Centre Européen d’Enseignement Supérieur de l’Ostéopathie” (CEESO) created this annex, which took effect in June 2010. It consisted of an admisibility file and an experience presentation file, both obligatory, and a grid for the evaluation of candidates’ continuing professional development.

Research annex: the activities of the CEESO Research Department (www.recherche-osteopathie.com) were submitted in this section, primarily because it was the only OEl able to provide suitable levels of evidence, i.e. funded clinical studies and peer-reviewed presentations and publications at scientific congresses.

Benchmarking annex: the SFDO reorganised the existing osteopathic profession benchmarks, the “Referentiel Métier Ostéopathie” and Osteopathic Activities and competences benchmarks.

Curricula annex: the eight OEIs shared their expertise.

The process therefore required the creation of two documents from scratch – the VAE annex and CNCP administrative file; the restructuring of an existing document – the research annex; and the restructuring of two documents inspired by the EQF – and the benchmarking and curricula annexes.

4. Discussion

The EQF was used in the creation of the benchmarking annex, for the requirements for competence and the production of knowledge (see Table 2). These concepts are to date not developed in existing national standards of practice in Europe which set out the legal regulations for osteopathy. UK27 and Swiss28 standards of osteopathic practice were in fact more focused on the concepts of skills or areas of capability. At the end of 2010, the General Osteopathic Council made available on line a provisional version of the revised “Osteopathic Practice Standards”, integrating these concepts.

The competences in the benchmarking annex cover mainly the notions of autonomy and complexity, for both learning and professional practice as defined by Tarbell.29 They cover the integral of cognitive and technical competence – know how, and social competence – know how to. These competences work together as a unique unit, as in any profession. Using this idea, we defined in the benchmarking annex an objective for the professional osteopath as: to be able to take appropriate and independent action in complex situations to deliver safe and effective treatment to patients. These competences call on future professionals’ powers of critical analysis, and therefore on the concept of evidence-oriented osteopathy as described by Fryer30. In terms of the production of knowledge, it was necessary to highlight in the benchmarking annex the recent development of scientific methodology in French osteopathy, both in student dissertations and in research activities, with the objective of providing a stronger evidence base in OEl curricula, as advocated in the UK.

To obtain certification, VAE for practising osteopaths was required to assess the same areas of expertise and competence combinations as those upon which undergraduates are examined. This has created new pedagogical challenges that need to be addressed in accordance with existing clinical competence assessment procedures.

This new framework for osteopathic learning details observable behaviours, but also the way knowledge and competence combine. We suggest that this will improve teaching and evaluation of “know how to act”, i.e. the complex competences which osteopaths develop through practice from foundation-level training onwards.

5. Conclusion

Eight French OEIs used data from the EQF to apply for professional certification which has recently been granted, and rated at the highest national level of professional certification, opening the way for the harmonisation of osteopathic training in France.

The EQF has permitted French osteopaths to create a definition of new competences which differs from other European osteopathic frameworks by its description of the mobilisation and combination of resources in the fields of knowledge and autonomy.

The use of the EQF by other European OEIs would provide an official way for each country to identify high quality and standardised education and professional qualifications, and would provide other health care professions with a better understanding of osteopathic education.

Certified of interest

GK and ZR are CEESO employees and have both worked on the VAE and research annexes as part of their jobs. MK is an SFDO employee and has acted as a consultant on the organisation and supervision of the whole of the application for certification process.

Acknowledgements

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References


The anatomical relationship between the tibialis posterior tendon and the talus – dissection and osteopathic interpretation.

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1). normal, talus as described in the anatomical literature¹², 13, between the talus head and the TPT nodule into three stages¹⁴: classifies the changes caused by the imbalanced relationship - Tali were removed from the 15 specimens; one specimen was and by the same person (CG, professor of anatomy).

- Specimens were all dissected following the same procedure, were available.

- A nodule was found in every specimen within the TPT next to the talus head.

- The specimen sectioned into 3mm slices revealed signs of ostelitis (see figure 4).

- Irreversible damage found in half of our specimens. Three stages of joint deterioration are described and a talus head tissue damage scale is proposed.

- These data suggest a rationale for a descriptive study examining their correlation with clinical signs found manually.

- These results would suggest that an imbalanced relationship between the TPT nodule and the talus head may cause irreversible damage that should not be confused with the reversible signs associated with somatic dysfunction.

- Osteopathic treatment may nevertheless obtain beneficial outcomes following these irreversible musculoskeletal changes: improving biomechanical function to decrease pain perception in irreversible processes has been discussed²⁰.

5. Conclusion

- The TPT nodule, no longer described in the literature, was present in all our specimens.

- An anatomical description of the relationship between the TPT nodule and the talus head is provided.

- Irreversible damage found in half of our specimens. Three stages of joint deterioration are described and a talus head tissue damage scale is proposed.

- These data suggest a rationale for a descriptive study examining patients’ radiological examinations for talus head tissue damage and their correlation with clinical signs found manually.

References


- Injury to cartilage can be caused by chronic tensile and shear stresses from the TPT between the accessory and parent bones²⁰. In our study, tissue damage was found in around half of the feet. Two of the remaining feet showed no signs of cartilage injury. These different stages of damage are in agreement with Gillot’s classification, suggesting a process of evolution, from the normal stage 1, to an intermediary stage 2, with impact on talus head cartilage, to a severe stage 3, with destruction of talus head bone and cartilage. A cohort study is necessary to fully verify this classification.

- These results would suggest that an imbalanced relationship between the TPT nodule and the talus head may cause irreversible damage that should not be confused with the reversible signs associated with somatic dysfunction.

- Osteopathic treatment may nevertheless obtain beneficial outcomes following these irreversible musculoskeletal changes: improving biomechanical function to decrease pain perception in irreversible processes has been discussed²⁰.

2.Material and Methods

- 15 non-embalmed cadaveric specimens were obtained according to institutional guidelines, respecting ethical rules.

- Specimen age was unknown and no previous medical histories were available.

- Specimens were all dissected following the same procedure, and by the same person (CG, professor of anatomy).

- Talii were removed from the 15 specimens; one specimen was sectioned into 3mm slices.

- Gillot, professor of anatomy with over 40 years’ experience, classifies the changes caused by the imbalanced relationship between the talus head and the TPT nodule into three stages¹⁴: 1) normal, talus as described in the anatomical literature¹², 13, 2) talus with a small, shallow dimple on the infero-medial part of the head cartilage, without cartilage destruction (see figure 1) and 3) talus with cartilage destruction and alteration of the bone structure underneath.

- Anatomical description of the relationship between the TPT nodule and the talus head may cause irreversible damage that should not be confused with the reversible signs associated with somatic dysfunction.

- Osteopathic treatment may nevertheless obtain beneficial outcomes following these irreversible musculoskeletal changes: improving biomechanical function to decrease pain perception in irreversible processes has been discussed²⁰.

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