

International Congress of Osteopathic Medicine

29 September – 2 October 2011 · Seminaris Seehotel Potsdam, Germany



**Sixth International Symposium on
Advances in Osteopathic Research**
Saturday 1 October 2011

Organizer



German Osteopathic
Association

in collaboration with

German Academy of Osteopathy



Program

08.30 – 08.45 Opening

*Marina Fuhrmann MSc, D.O., President of the German Osteopathic Association (VOD)
Florian Schwerla MSc, D.O., German Academy of Osteopathy (AFO)*

08.45 – 09.15 Keynote lecture

Global Evidence and Local Implementation: State of the Art and Impact on Osteopathy

Dr. Gerd Antes (German Cochrane Centre)

09.15 – 10.30 Presentations

Influence of Osteopathic Treatments on Craniomandibular Dysfunction. A Randomized Controlled Trial

Thorsten Schrammek (College Sutherland, Germany)

Effect of OMT on Length of Stay in a Population of Preterm Infants: A Randomized Controlled Trial

Francesco Cerritelli (European Institute for Evidence Based Osteopathic Medicine - EBOM, Italy)

Exploring European Osteopathic Identity: An Analysis of the Professional Websites of European Osteopathic Organizations

Constanze Wagner (Vienna School of Osteopathy, Austria)

Am I Imagining Things? Eye Closure during Palpation Improves Diagnostic Consistency in Experienced Osteopaths

Jorge E. Esteves (British School of Osteopathy - BSO, Oxford Brookes University, UK)

Do Osteopathic Treatments Influence the Lower Urinary Tract Symptoms (LUTS) in Patients with Benign Prostatic Syndrome (BPS)? A Randomized Controlled Trial.

Michael Welzel (Still Academy, Germany)

10.30 – 11.00 Coffee break

11.00 – 11.30 Keynote lecture

Knowledge and Evidence in Osteopathy

Stephen Tyreman PhD (British School of Osteopathy - BSO, UK)

11.30 – 12.45 Presentations

The Influence of Osteopathic Treatment on Quality of Life in Children and Adolescents with Asthma

Jan Hagoort (Private School for Classical Osteopathic Medicine – SKOM, Germany)

Prevalence of Somatic Dysfunctions in Adult Patients with Cystic Fibrosis - A Pilot Study

Rafael Zegarra-Parodi (Centre Européen d'Enseignement Supérieur de l'Ostéopathie - CEESO, France)

Osteopathic Approach to Treatment of Developmental Hip Dysplasia (DHD) in Infants

Larisa Lasovetskaya (Russian Academy of Osteopathic Medicine, St. Petersburg)

Osteopathic Treatment of Women with Voiding Dysfunction: A Randomized Controlled Trial

Michaela Rütz (German Academy of Osteopathy - AFO)

12.45 – 14.00 Lunch break

14.00 – 16.00 Poster presentations

Abstracts of Presentations

Influence of Osteopathic Treatments on Craniomandibular Dysfunction. A Randomized Controlled Trial.

Bernhard Gerber, Katharina Kästner, Thorsten Schrammek (College Sutherland)

Objective: To evaluate whether osteopathic treatment of patients with craniomandibular dysfunction (CMD) influences specific pain and symptoms.

Material and methods: Three qualified osteopaths performed the osteopathic treatments in their private practices from August 2007 to July 2008. 59 CMD-diagnosed patients (48 women, 11 men) aged between 20 and 65 years (average age 42 years) participated in the study. Patients were randomized allocated (external) to one of the two groups, 29 patients to the intervention group, 30 to the control group. The patients in the treatment group received 4 osteopathic treatments in two-week intervals. In the control-group patients remained untreated for an 8-week period. A follow-up was carried out 12 weeks after the last osteopathic session. The main outcome parameter "pain intensity" was measured via visual analogue scale (VAS). The secondary parameters "CMD-specific symptoms" were assessed by means of the Occlusal Index (Slavicek) and "quality of life" by means of the SF-36.

Results: The inter-group comparison of changes revealed clinically relevant and statistically significant improvements in the osteopathic treated group for the main outcome parameter pain intensity. Mean average pain intensity increased in the intervention group on the VAS from 4.5 to 2.4 (improvement 47%, 95% CI: -3.0 to -1.1, $p < 0.005$), actual pain and maximal pain showed similar results. In the control group only a small improvement was observed. The results of the secondary parameters presented improvements of CMD-specific symptoms of 36% (-4.1, 95% CI: -5.6 to -2.5, $p = 0.004$). Quality of life did not improve very much. The additional treatments of the control group after completion of study confirm these results. The follow-up results revealed stability to a large extend.

Conclusion: Four osteopathic treatments in an 8-week period resulted in a significant improvement of CMD-specific pain intensity and symptoms. The findings of a previous pilot study related to the Occlusal Index could be reproduced.

Effect of OMT on Length of Stay in a Population of Preterm Infants: A Randomized Controlled Trial

Cerritelli F, Barlafante G, Pizzolorusso G (European Institute for Evidence Based Osteopathic Medicine - EBOM, Italy)

Ciardelli F², La Mola E², Cozzolino V², Renzetti C (AIOT Research Institute, Pescara, Italy)

Introduction: The use of osteopathic manipulative treatment (OMT) in preterm infants has been documented and results from previous studies suggest the association between OMT and length of stay (LOS) reduction, as well as significant improvement in several clinical outcomes. Aim of the present study is to show the effect of OMT on LOS and daily weight gain in a sample of premature infants.

Materials and Methods: Randomized controlled trial on preterm newborns admitted in a single NICU between 2008-2009. N=101 subjects free of medical complications and with gestational age >28 and < 38 weeks were enrolled and randomized in two groups: study group (N=47) and control group (N=54). All subjects received routine pediatric care and OMT was performed to the study group for the entire period of hospitalization. Endpoints of the study included differences in LOS and daily weight gain. Statistical analyses were based on univariate tests and multivariate linear regression.

Results: Univariate statistical analysis showed no significant imbalances among treated and control groups in terms of main characteristics measured at admission. At the end of follow-up, OMT was significantly associated with LOS (days) [27.3±17.3 vs. 31.5±21.7, p=0.03] and with daily weight gain (grams) [65.1±28.5 vs. 58.6±28.8, p=0.03]. After adjusting for all potential confounders, multivariate analysis showed a significant association between OMT and LOS reduction (mean difference between treated and control group: -6.325; 95% CI= -3.96 to -8.69; p< 0.0001). OMT was not associated to any change in daily weight gain.

Conclusions: The present study suggests that OMT plays an important role in the management of preterm infants hospitalization.

Exploring European Osteopathic Identity: An Analysis of the Professional Websites of European Osteopathic Organizations

Constanze Wagner (Vienna School of Osteopathy, Austria)

Patrick van Dun (Department Clinical Medicine and Biotechnology, Danube University Krems, Austria)

Introduction: In Europe differences in terminology and practices exist within the osteopathic professional group. However, the identity of European osteopathy is an important precondition for defining a professional profile.

Objective: This study explores the current status of osteopathic identity in Europe.

Materials and methods: A systematic and comparative analysis of the websites of 29 European osteopathic unions and registers (from 19 countries) and 3 international osteopathic organizations were carried out. The analysis was based on a list of questions arranged according to 11 categories, compiled following a systematic and historical analysis of the literature with the focus on terms referring to identity, identity crisis and professionalization. The predominantly phenomenological approach highlighted these terms in their osteopathic context.

Results: The term "identity" refers to a state of unity, continuity and coherence. However, the professional unions and registers, and international osteopathic organizations, do not uniformly characterize osteopathy. They agree most (69%) with one another in defining osteopathy as being 'manual in practice'. 66% of these registers and organizations describe osteopathy as a 'system of diagnosis and treatment'. In contrast, 31% describe osteopathy as a 'system of treatment' (no diagnosis is mentioned). 31% define osteopathy as form of medicine, and 38% define it as a form of 'therapeutic method or treatment'. Only 24% see the role of osteopathy to lie in first-line medical care.

Conclusions: Significant intra-professional differences exist in the presentation of European osteopathy. The existence of these differences conflicts with the idea of a collective identity. The criteria for a professionalization of osteopathy as an academic profession are not fulfilled at present. Osteopathy is undergoing a crisis of identity in Europe that can only be resolved creatively, through a common orientation of professional values.

Am I Imagining Things? Eye Closure during Palpation Improves Diagnostic Consistency in Experienced Osteopaths

Jorge E. Esteves (British School of Osteopathy, UK)

Charles Spence (University of Oxford, Department of Experimental Psychology, UK)

Background: Osteopaths make perceptual judgments regarding the presence of soft tissue changes based on information conveyed by their senses. Previously, we have shown a link between the development of expertise in osteopathy and the integration of visuo-haptic diagnostic information. Here, the findings from two experiments are reported.

Material and methods: Firstly, we investigated whether the simultaneous use of vision and haptics improves diagnostic consistency. The effects of having one's eyes closed or open during the haptic exploration of tissue dysfunction were also explored. Nine participants at different levels of expertise examined the lumbar spine of eighteen models on six separate occasions under conditions of unimodal [haptics-eyes-closed; haptics-eyes open] and bimodal testing [visuo-haptic]. In a second experiment, 95 clinicians and students were surveyed on the role of mental imagery and visuo-haptic integration.

Results: When expert clinicians were asked to close their eyes during the haptic exploration of tissue dysfunction, their diagnostic consistency improved: that is, a higher degree of intra-individual agreement was observed in their diagnoses. Novices were considerably better in the haptic-eyes open condition. Results from the cross-sectional survey revealed that, compared to students, the experts' levels of agreement to all mental imagery and visuo-haptic integration questions were significantly higher.

Conclusions: On-going clinical practice enables osteopaths to combine information from vision and haptics more efficiently. Such visuo-haptic sensory integration is likely to be facilitated by top-down processing associated with mental imagery. Visual, tactile, and kinaesthetic imagery are likely to play a central role in enabling experts to access mental representations of normal and altered structure and function from their long-term memory.

Do Osteopathic Treatments Influence the Lower Urinary Tract Symptoms (LUTS) in Patients with Benign Prostatic Syndrome (BPS)? A Randomized Controlled Trial.

Steffen Kramer, Gerrit Schüle, Michael Welzel (Still Academy, Germany)

Michaela Ruetz (German Academy of Osteopathy - AFO)

Objective: To evaluate whether osteopathic treatment influences the symptom severity in men with lower urinary tract symptoms (LUTS) defined as an International Prostate Symptom Score (IPSS) >8 associated with Benign Prostatic Syndrome (BPS).

Study design: Randomized controlled trial including a follow-up three months succeeding the last osteopathic session.

Materials and methods: 64 men aged between 41 and 69 years (average age 58.5 ± 8 years) with urological diagnosed BPS and LUTS participated in the study. By means of external randomization 34 men were allocated to the osteopathic group and 30 to the control group. In the osteopathic group case histories and osteopathic examination were followed by four osteopathic treatments at intervals of two weeks. The custom tailored treatment based on osteopathic principles. The patients of the control group did not receive any treatment during the study period. Primary outcome parameter was the symptom severity level measured by the IPSS. The secondary outcome parameter "disease-specific Quality of Life (QoL)" was assessed by means of the Quality of Life Item of the IPSS and the parameter "erectile dysfunction" by the International Index of Erectile Function (IIEF). According to an intention-to-treat analysis the available data of one dropped-out patient in the osteopathic group were utilized by last observation carried forward (LOCF).

Results: The inter-group comparison of changes revealed statistically significant improvement in support of the osteopathic treated group for the main outcome parameter "symptom severity level" (difference of means = -5.6; 95% CI: -7.7 to -3.5; $p < 0.0005$). IPSS improved in the osteopathic group by 38.5% (difference of means = -7.4; 95% CI: -9.1 to -5.8; $p < 0.0005$) and in the control group by 10% (difference of means = -1.8; 95% CI: -3 to -0.6; $p = 0.004$). The results related to the secondary parameters presented clinically relevant positive effects too. At baseline 2 men (6%) were satisfied with their current QoL, at the end of the study period 19 men (58%) were "delighted to mostly satisfied". Erectile function improved in the osteopathic group by 11% (difference of means = 2.2; 95% CI: 0.5 to 4; $p = 0.01$). In the control group no changes were recorded. The follow-up showed that the results of all outcomes in the intervention group remained stable respectively continued to improve.

Conclusion: Four osteopathic treatments over a period of eight weeks led to clinically relevant positive changes of urological symptom severity level in men suffering from LUTS associated with BPS. Further studies are warranted extending the focus on further hypotheses related to the subject of male lower urinary tract symptoms.

The Influence of Osteopathic Treatment on Quality of Life in Children and Adolescents with Asthma. A Pre-Post Study.

*Fried Berning, Jan Hagoort (Private School of Classic Osteopathic Medicine - SKOM, Germany)
Michaela Ruetz (German Academy of Osteopathy - AFO)*

Objective: To evaluate the effectiveness of osteopathic treatment on quality of life in children and adolescents suffering from asthma.

Study design: One-armed clinical trial including a four-weeks waiting period followed by an eight-weeks treatment period and two subsequent follow-ups.

Materials and methods: Two trained osteopaths conducted the study in their private practices in Switzerland and Germany. 34 children and adolescents aged between 6 and 17 years (average age 11 ± 3 years) with a history of medically diagnosed asthma present for at least half a year participated in the study. After the waiting period the patients received 5 osteopathic treatments (3 in one-week intervals and 2 in two-weeks intervals). The osteopathic examination included a special assessment form for testing the esophagogastric junction. The custom tailored osteopathic treatment based on osteopathic principles. The primary outcome parameter was disease-specific quality of life measured by the Pediatric Asthma Quality of Life Questionnaire (PAQLQ). Secondary outcome parameters involved serial Peak Expiratory Flow (PEF) measurements, use of inhaled sympathomimetic drugs as concomitant medication, frequency of asthma-related nocturnal symptoms and reflux, and frequency of osteopathic dysfunctions.

Results: The direct comparison of changes between the waiting period and the treatment period resulted in a statistically significant improvement of disease-related quality of life (Overall PAQLQ score: difference of means = 30.2; 95% CI: 25.8 to 35.2; $p < 0.001$). All domains of the PAQLQ (symptoms, activity limitation and emotional function) improved similarly. PEF measurements showed a constant improvement of lung function (difference of means = 54.2; 95% CI: 33.7 to 76.3; $p < 0.001$). During the intervention period the inhalation frequency of concomitant medication decreased by 72%. The incidence of nocturnal symptoms decreased by 70% and of reflux by 25%. The follow-up assessments (4 and 10 weeks after the end of the treatment period) revealed a stability of results.

Conclusion: Five osteopathic treatments over a period of eight weeks led to clinically relevant positive changes of disease-specific quality of life in children and adolescents suffering from asthma. Further studies are warranted, performed in randomized controlled designs.

Prevalence of Somatic Dysfunctions in Adult Patients with Cystic Fibrosis - A Pilot Study

Lucile Soubeiran, [Rafael Zegarra-Parodi](#) (Centre Européen d'Enseignement Supérieur de l'Ostéopathie - CEESO, France)

Dominique Hubert, Nadine Desmazes-Dufeu (Centre de Ressources et de Compétences de la Mucoviscidose - CRCM Service de Pneumologie, Hôpital Cochin Paris, France)

Raphaël Serreau (Unité de Recherche Clinique – URC Cochin-Necker Paris, France)

Background: Pancreatic insufficiency and chronic endobronchial infection are common complications in cystic fibrosis (CF) and are managed with medical standard care. CF adult patients seek complementary care such as osteopathic manipulative treatments (OMT) to relieve their spinal and abdominal pains and improve their quality of life. No data is available regarding OMT for CF patients.

Objective: To describe and compare the prevalence of somatic dysfunctions (SDs) among CF patients with the prevalence of SDs among patients without chronic disease.

Materials and methods: CF patients ($n=14$) were recruited from a French CF Hospital Center and patients without chronic disease ($n=14$) were recruited from the clinical department of a French Osteopathic Educational Institution. Study populations were paired according to age and sex. Common osteopathic diagnosis procedures were used for a full-standardized osteopathic examination and were recorded using a modified "Outpatient Osteopathic SOAP (Subjective, Objective, Assessment, Plan) Note Form". Qualitative data were then compared with the Fisher's exact test; α risk was set at 0.05.

Results: The most frequent SDs were observed in the study group compared to the control group, mainly in the thoraco-pulmonary area: "lung motility" ($p < 0.0001$), "left pleural dome" ($p < 0.0001$), "mediastinum" ($p=0.02$) and respiratory muscles: diaphragm ($p=0.02$) and sub-clavicular muscles ($p=0.02$).

Conclusions: This simple observational study suggests that the most frequent SDs may be associated with postural changes and physiopathological consequences of respiratory insufficiency in CF patients. One of the limitations of the study is due to a lack of literature on the palpated tissue changes that might be due to CF's irreversible physiopathological changes.

Osteopathic Approach to Treatment of Developmental Hip Dysplasia (DHD) in Infants

Larisa Lasovetskaya, Tatiana Karpova (Russian Academy of Osteopathic Medicine, St. Petersburg)

Background: Developmental hip dysplasia (DHD) is the most frequent locomotive apparatus pathology in infants of the first year of life. Unfortunately existing methods of orthopedic examination and care cannot guarantee success in 100% of cases, which may have a negative influence over gait, distribution of forces in the body and general posture.

Objective: Evaluation of possibilities of osteopathic approach to DHD treatment in infancy.

Material and methods: The study was based upon the analysis of 195 infants (age 0–8 months) with diagnosed DHD, based upon osteopathic, orthopedic and ultrasound (USD) examinations; 122 of them were treated osteopathically (study group, 6–8 treatments, 10–21 days apart), and 73 orthopedically (reference group). The study could not be randomized due to medical and ethical reasons. At the age of 10–12 months an osteopath and an orthopedist examined all patients. All examinations were blinded.

Results: Three DHD types were differentiated. The *primary type* (38.5%) was present before birth and manifested through marked dysfunctions of hip joint/joints, innominate bones, sacrum, and coccyx. The *secondary type* (15.6%) developed during the first weeks of life and was caused by fascial tensions coming from abdominal viscera, diaphragm, by non-physiological SBS strains, vertebral column dysfunctions. The *mixed type* combined the features of both.

Based on the results of osteopathic examination five palpatory patterns of pelvic and whole body involvement were found: (1) frontal-horizontal (45.9%), (2) unilateral frontal (24.6%), (3) bilateral frontal (5.7%), (4) torsional (8.2%), (5) pelvic lesions combined with lateral SBS strains (15.6%).

Although normalization of USD picture happened simultaneously in both groups, the rate of incomplete resolution of dysfunctions with orthopedic treatment was significantly higher ($P < 0.05$) in comparison with osteopathic approach.

Conclusion: Osteopathic treatment is more complete and pathogenically based in comparison with orthopedic methods. It results in symmetrical development of the whole pelvic girdle including hip joints, which is important for proper locomotion and body posture. Tension resolution favors body organization along the midline.

Osteopathic Treatment of Women with Voiding Dysfunction: A Randomized Controlled Trial

*Claudia Ringkamp, Ben Rodriguez (Still Academy, Germany)
Michaela Rütz (German Academy of Osteopathy - AFO)*

Objective: To evaluate whether osteopathic treatment influences the symptom severity level of women suffering from voiding dysfunction.

Materials and methods: Randomized controlled trial including a follow-up three months following the last osteopathic session. 47 women aged between 19 and 82 years (average age 48 years) with urological diagnosed voiding dysfunction participated in the study. By means of external randomization 24 patients were allocated to the intervention group and 23 to the control group. One dropout was recorded in the control group. In the intervention group case histories and osteopathic examination were followed by five osteopathic treatments at intervals of two weeks. The diagnosed dysfunctional structures were treated individually based on basic osteopathic principles. The patients of the control group did not receive any treatment during the study period. Primary outcome parameter was the symptom severity level measured by the American Urological Symptom Index Score (AUASI). The secondary outcome parameter, quality of life was assessed by means of the SF-36; the frequency of cystitis by a Bladder Inflammation Diary and urinary capacity by ultrasound (urological examination).

Results: The inter-group comparison of changes revealed statistically significant improvements in favor of the osteopathically treated group for the main outcome parameter "symptom severity level" on the AUASI score (difference of means 8.7; 95% CI= 6.4 to 10.9; $p < 0.005$). During the course of the study the AUASI score decreased in the intervention group from 15.6 to 6.8 (95% CI= 6.9 to 10.7; $p < 0.005$). No changes were observed in the control group. The results related to the secondary parameters presented clinically relevant positive effects too. The physical health scale of the SF-36 increased by 3.9 in the intervention group (95% CI= 1.9 to 6.5; $p = 0.004$) and the mental health scale of the SF-36 increased by 5.1 (95% CI=2.5 to 7.8; $p = 0.001$). Both remained unchanged in the control group. Urinary capacity and frequency of cystitis decreased. The follow-up showed that the results of all outcome parameters in the intervention group remained stable or continued to improve.

Conclusion: Five osteopathic treatments over a period of ten weeks led to clinically relevant positive changes of urological symptom severity level of women suffering from voiding dysfunction. Further studies are warranted extending the focus on increased number of cases and further hypotheses related to the subject of female voiding dysfunction.

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