AFO AKADEMIE FÜR OSTEOPATHIE

Eighth International Symposium on Advances in Osteopathic Research

Thursday, September 29, 2016

The Symposium will be held in conjunction with the

19. International Congress of Osteopathic Medicine

30 .September – 2. Oktober 2016 in Bad Nauheim

VERBAND DER OSTEOPATHEN DEUTSCHLAND e.V.

Program

11.00 – 11.15 Opening
Florian Schwerla, M.Sc. (USA), D.O., German Academy of Osteopathy (AFO)
Prof. Marina Fuhrmann, M.Sc. (USA), D.O., German Osteopathic Association (VOD)

11.15 – 12.00 Keynote lecture
Osteopathic Research: More than Randomization and Metaanalyses
Prof. Dr. med K.L. Resch, German Institute for Health Research, Bad Elster

12.00 – 12.40 Presentations 1
Benefit of osteopathic treatment on proprioceptive balance in benign paroxysmal positional vertigo. A randomized controlled trial.
Matteo Tornaghi DO, MSc Ost, ERCOM - European Research Center of Osteopathic Medicine, Milano, Italy

Osteopathic treatment in addition to usual care in patients with Gastroesophageal Reflux Disease (GERD). A randomized controlled trial.
Michaela Rütz M.Sc. (USA), D.O., German Academy of Osteopathy (AFO)

12.40 – 14.00 Lunch break

14.00 – 15.00 Presentations 2
Osteopathic manipulative treatment on psychiatric patients with intellectual disability in a therapeutical psychiatric community. 5 case reports.
Dr. Stefano Borzone M.D., D.O., I.E.M.O. - Istituto Europeo per la Medicina Osteopatica, Genoa, Italy

Learning Environment, Preparedness and Satisfaction in Osteopathy in Europe: The PreSS Study.
Emanuele Luciani D.O., Clinical-based Human Research Department, Centre for Osteopathic Medicine — C.O.ME. Collaboration, Pescara, Italy

Muscle energy technique for non-specific low-back pain. Systematic Review (Cochrane Database of Systematic Reviews)
Helge Franke M.Sc. (USA), D.O., Institute for Osteopathic Studies, Siegen, Germany

15.00 – 15.45 Keynote lecture
Integrating osteopathic techniques based on physiological & psychosocial mechanisms
Gary Fryer, Ph.D., B.Sc. (Osteo), Victoria University, Melbourne, AU

15.45 -16.15 Coffee Break

16.15 – 17.15 Presentations 3
Osteopathic treatment in patients with age-related macular degeneration. Pre-post study
Dana Ihlow D.O., Private School for Classical Osteopathic Medicine – SKOM, Germany

Relationship between somatic dysfunction and pain perception in patients with frequent tension type headache following osteopathic treatment. A randomized controlled trial
Matteo Tornaghi DO, MSc Ost, ERCOM - European Research Center of Osteopathic Medicine, Milano, Italy

A multicenter, randomized, controlled trial of osteopathic manipulative treatment on preterms.
Nuria Ruffini, DO., C.O.ME. Collaboration - Centre for Osteopathic MEdicine., Pescara, Italy

17.15 -18.00 Lecture
Research in Osteopathic Manipulative Medicine at the AT Still Research Institute
Brian Degenhardt DO, A.T. Still Research Institute, Kirksville College of Osteopathic Medicine, USA

Benefit of osteopathic treatment on proprioceptive balance in benign paroxysmal positional vertigo. A randomized controlled trial.

Liria Papa, Andrea Amodio, Federica Biffi, Alfonso Mandara (International College of Osteopathic Medicine – ICOM, Italy), presented by Matteo Tornaghi DO, MSc Ost, ERCOM

Objective: To investigate the effects of the osteopathic manipulative treatment (OMT) on balance and quality life in patients with benign paroxysmal positional vertigo (BPPV).

Materials and Methods: Thirty-five patients with BPPV were randomized into two groups: 20 patients received four osteopathic treatments (TG) and 15 patients were included as sham group (SG). Before the first and fourth treatment (a treatment per week), stabilometric platform was used to evaluate posture balance measures, including velocity, swinging area, maximum swinging on X- and Y-axis. At the same time points, all patients also completed Dizziness Handicap Inventory (DHI), to evaluate the effect of the OMT treatment on the quality of life.

Results: Compared to SG, TG had a significant decrease in global, functional and physical components of DHI ($p=0.02$; $p=0.03$ and $p=0.03$, respectively). Apart the oscillations on X-axis, all stabilometric parameters were significantly different between pre-and post treatments in TG (velocity $p=0.007$; area $p=0.01$; oscillation on Y-axis $p=0.02$). No significant changes of stabilometric measures on the time were found in SG. An effect of OMT on the area measure was found ($p=0.02$). In TG, a correlation analysis showed associations between area change scores and global ($r=0.53$; $p=0.02$), as well as functional ($r=0.50$; $p=0.03$) and physical ($r=0.60$; $p= 0.01$) variations of DHI subscale scores.

Conclusion: The OMT treatment is a useful approach to reduce imbalance symptoms and to improve the quality of life in dizzy patients with traditional medical therapy.

Osteopathic treatment in addition to medical standard therapy in patients with Gastroesophageal Reflux Disease (GERD). A randomized controlled trial.

Michaela Rütz (German Academy of Osteopathy), Andreas Lynen, Meike Schömitz, Maik Vahle (Still Academy Germany)

Objective: To evaluate the effectiveness of custom tailored osteopathic treatment in addition to medical standard therapy in patients suffering from Gastroesophageal Reflux Disease.

Methods: Three trained osteopaths conducted the study in their private practices in Cologne and Bielefeld, Germany. Sample size based upon a sample size calculation. 70 patients aged 27 to 75 years (average age 50.3 ± 13.2 years) with a history of GERD were included in the study. Symptoms like heartburn, acid regurgitation, and/or dyspeptic complaints had to be present for at least 6 months with a minimum frequency of once or twice a week. By means of external randomization 35 patients were allocated to the intervention group and 35 to the control group. In the intervention group case histories and osteopathic examination were followed by 4 osteopathic treatments at intervals of two weeks with a follow-up after 12 weeks. The custom tailored treatment was based on osteopathic principles. All participants were allowed to continue with their individual pharmacological therapy on demand (usual care). Primary outcome parameter was frequency and severity of reflux symptoms (Reflux Disease Questionnaire, RDQ). As secondary outcome parameters “quality of life in reflux and dyspepsia” was assessed by a disease-specific questionnaire (QOLRAD); “medication use” by a diary; and “frequency of osteopathic dysfunctions” by an osteopathic examination form.

Results: The inter-group comparison of changes revealed statistically significant and clinically relevant improvements in support of the osteopathic treatment for the main outcome parameter “symptom frequency and severity” (RDQ overall score: between group difference of means 5.9; 95% CI: 3 to 8.9; $p<0.005$). Frequency of symptoms decreased by 37% and severity by 29%. Equally quality of life improved statistically significant in favor of the osteopathic group (QOLRAD overall score: between group difference of means 0.7; 95% CI: 0.35 to 1; $p<0.005$). The follow-up assessment in the intervention group showed extensive stability of all results. Medication use decreased slightly in the intervention group and remained largely stable in the control group. The

main osteopathic dysfunctions were identified in the functional unity of diaphragm/stomach/esophagus followed by the sacral area, cervical spine, and cranium (sutures and base of the skull).

Conclusion: Four osteopathic treatments over a period of six weeks led to statistically significant and clinically relevant positive changes of reflux symptoms and quality of life in reflux and dyspepsia in patients suffering from GERD. These results support the findings of a former investigation (Nerreter et al., 2006) indicating reproducibility.

Osteopathic manipulative treatment on psychiatric patients with intellectual disability in a therapeutical psychiatric community. 5 case reports

Stefano Borzone (I.E.M.O. - Istituto Europeo per la Medicina Osteopatica - Genoa - Italy)

Objective: to assess the effectiveness of osteopathic manipulative treatment (OMT) in psychiatric patients (PPs) with intellectual disability (ID) in order to obtain a psychological and behavioral improvement, to give a better effect in the rehabilitation and to reduce psychiatric drugs.

Materials and methods: five patients are selected according to their serious pathologies, drug resistance and behavioral disorders which are not affected by the rehabilitation in therapeutic community for PPs. Three patients are treated once a week for 5 times; 2 patients are treated 8 and 6 times in two months. Specialized staff 24/7 observes them. The PPs with ID must be observed and the objective observation is discussed two times a week in specific staff meetings. This is the best analysis and patients' evaluation in these cases. The staff is composed by: M.Ds, Psychologists, D.O., specialized assistants.

Results: 100% of the patients had a behavioural and psychopathological improvement. It was possible to reduce the drugs (up to 50%) only for the two longer-treated patients. One of these got out of a catatonic crisis thanks only to a cranial OMT. For each patient was evident an “half-life” of the osteopathic treatment.

Conclusions: The patients treated with an OMT for some months got better in an evident way and it was possible to reduce the psychopharmacological drugs. If the OMT is too short, the effectiveness on a behavioural level is loss in few weeks.

Learning Environment, Preparedness and Satisfaction in Osteopathy in Europe: The PreSS Study.

Emanuele Luciani, Francesco Cerritelli (Clinical-based Human Research Department, Research Division, C.O.ME. Collaboration, Pescara, Italy)
Patrick van Dun (Free University of Brussels, Department of Osteopathic Sciences, Belgium)
Jorge Esteves (British School of Osteopathy - BSO, London, United Kingdom)
Christian Lunghi (Centro Ricerche Olistiche per la Medicina Osteopatica e Naturale Rome, Italy)
Marco Petracca (Centre pour l'Etude, la Recherche et la Diffusion Osteopathiques, Rome, Italy)
Liria Papa, International College of Osteopathic Medicine - ICOM, Milan, Italy)
Olivier Merdy (Institut des Hautes Etudes Ostéopathiques -IdHEO, Orvault, France, ,
Anne Jäkel (European School of Osteopathy - ESO, Maidstone, United Kingdom)

Objective: 1) to assess the preparedness to practice and satisfaction in learning environment amongst new graduates from European osteopathic institutions; 2) to compare the results of preparedness to practice and satisfaction in learning environment between and within countries where osteopathy is regulated and where regulation is still to be achieved; 3) to identify possible correlations between learning environment and preparedness to practice.

Method: Osteopathic education providers of full-time education located in Europe were enrolled, and their final year students were contacted to complete a survey. Measures used were: Dundee Ready Educational Environment Measure (DREEM), the Association of American Medical Colleges (AAMC) and a demographic questionnaire. Scores were compared across institutions using one-way ANOVA and generalised linear model.

Results: Nine European osteopathic education institutions participated in the study (4 located in

Italy, 2 in the UK, 1 in France, 1 in Belgium and 1 in the Netherlands) and 243 (77%) of their final-year students completed the survey. The DREEM total score mean was 121.4 (SEM: 1.66) whilst the AAMC was 17.58 (SEM:0.35). A generalised linear model found a significant association between not-regulated countries and total score as well as subscales DREEM scores ($p<0.001$). Learning environment and preparedness to practice were significantly positively correlated ($r=0.76$; $p<0.01$).

Discussion: A perceived higher level of preparedness and satisfaction was found amongst students from osteopathic institutions located in countries without regulation compared to those located in countries where osteopathy is regulated; however, all institutions obtained a 'more positive than negative' result. Moreover, in general, cohorts with fewer than 20 students scored significantly higher compared to larger student cohorts. Finally, an overall positive correlation between students' preparedness and satisfaction were found across all institutions recruited.

Muscle energy technique for non-specific low-back pain. Cochrane Database of Systematic Reviews

Helge Franke (Institute for Osteopathic Studies, Siegen, Germany), Gary Fryer (Victoria University, College of Health and Biomedicine, Melbourne, Australia), Raymond WJG Ostelo (VU University, EMGO Institute for Health and Care Research, Amsterdam, Netherlands), Steven J Kamper (The George Institute for Global Health, Musculoskeletal Division, Sydney, Australia)

Background: Low-back pain (LBP) is responsible for considerable personal suffering due to pain and reduced function, as well as the societal burden due to costs of health care and lost work productivity. For the vast majority of people with LBP, no specific anatomical cause can be reliably identified. For these people with non-specific LBP there are numerous treatment options, few of which have been shown to be effective in reducing pain and disability. The muscle energy technique (MET) is a treatment technique used predominantly by osteopaths, physiotherapists and chiropractors which involves alternating periods of resisted muscle contractions and assisted stretching. To date it is unclear whether MET is effective in reducing pain and improving function in people with LBP.

Objectives: To examine the effectiveness of MET in the treatment of people with non-specific LBP compared with control interventions, with particular emphasis on subjective pain and disability outcomes.

Search Methods: CENTRAL, MEDLINE, EMBASE, five other databases and two trials registers were searched from inception to May and June 2014 together with reference checking and citation searching of relevant systematic reviews.

Selection criteria: Randomized controlled trials assessing the effect of MET on pain or disability in patients with non-specific LBP were included.

Data Collection an Analysis: Two authors independently assessed the risk of bias and extracted the data. Meta-analysis was performed where clinical homogeneity was sufficient. The quality of the evidence for each comparison was assessed with the GRADE approach.

Main Results: There were 12 randomized controlled trials with 14 comparisons included in the review, with a total sample of 500 participants across all comparisons. Included studies were typically very small (n = 20 to 72), all except one were assessed as being at high risk of bias, and all reported short-term outcomes. For the purposes of pooling, studies were divided into seven clinically homogenous comparisons according to the patient population (acute or chronic LBP) and the nature of the control intervention. Most of the comparisons (five out of seven) included only one study, one comparison had two studies, and one comparison included seven studies.The meta-analyses provided low-quality evidence that MET provided no additional benefit when added to other therapies on the outcomes of chronic pain and disability in the short-term (weighted mean difference (WMD) for pain 0.00, 95% CI -2.97 to 2.98 on a 100-point scale; standardised mean difference (SMD) for disability -0.18, 95% CI -0.43 to 0.08, 7 studies, 232 participants). There was low-quality evidence that MET produced no clinically relevant differences in pain compared to sham MET (mean difference (MD) 14.20, 95% CI -10.14 to 38.54, 1 study, 20 participants). For the comparison of MET to other conservative therapies for acute non-specific LBP, there was very low-quality evidence of no clinically relevant difference for the outcomes of pain (MD -10.72, 95% CI -32.57 to 11.13, 2 studies, 88 participants) and functional status (MD 0.87, 95% CI -6.31 to 8.05, 1 study, 60 participants). For the comparison of MET to other conservative therapies for chronic non-

specific LBP, there was low-quality evidence of no clinically relevant difference for the outcomes of pain (MD -9.70, 95% CI -20.20 to 0.80, 1 study, 30 participants) and functional status (MD -4.10, 95% CI -9.53 to 1.33, 1 study, 30 participants). There was low-quality evidence of no clinically relevant difference for the addition of MET to other interventions for acute non-specific LBP for the outcome of pain (MD -3, 95% CI -11.37 to 5.37, 1 study, 40 participants) and low-quality evidence of an effect in favour of MET for functional status (MD -17.6, 95% CI -27.05 to -8.15, 1 study, 40 participants). For chronic non-specific LBP, there was low-quality evidence of an effect in favour of MET for the addition of MET to other interventions for the outcomes of pain (MD -34.1, 95% CI -38.43 to -29.77, 1 study, 30 participants) and functional status (MD -22, 95% CI -27.41 to -16.59, 1 study, 30 participants). Lastly, there was low-quality evidence of no difference for the addition of MET to another manual intervention compared to the same intervention with other conservative therapies for the outcomes of pain (MD 5.20, 95% CI -3.03 to 13.43, 1 study, 20 participants) and functional status (MD 6.0, 95% CI -0.49 to 12.49, 1 study, 20 participants).No study reported on our other primary outcome of general well-being. Seven studies reported that no adverse events were observed, whereas the other five studies did not report any information on adverse events.

Authors Conclusions: The quality of research related to testing the effectiveness of MET is poor. Studies are generally small and at high risk of bias due to methodological deficiencies. Studies conducted to date generally provide low-quality evidence that MET is not effective for patients with LBP. There is not sufficient evidence to reliably determine whether MET is likely to be effective in practice. Large, methodologically-sound studies are necessary to investigate this question.

Osteopathic treatment in patients with age-related macular degeneration. Pre-post study.
Dana Ihlow (Private School for Classical Osteopathic Medicine – SKOM, Germany)

Objective: Does osteopathic treatment influence state of affected retinal areas, visual acuity, and disease-related quality of life in patients suffering from age-related macular degeneration (AMD)?

Methods: One trained osteopath conducted the study in her private practice in Lübeck, Germany. 27 patients aged 56 to 81 years (average age 71.4 ± 6.8 years) participated in the study. According to medical diagnosis patients suffering from AMD in early stage (with appropriate clinical presentation) and in advanced stages of atrophic AMD were included. After enrollment and data collection a six-weeks waiting period followed. In the subsequent treatment period (10 weeks) the patients received after repeated data collection five custom tailored osteopathic treatments based on osteopathic principles. One week after the last treatment data collection was completed. A follow-up was conducted 12 weeks later. Outcome parameters were status of retinal pigment epithelium (stereoscopic examination, fundus photography), visual acuity (visual test via reading chart with Landolt rings), and disease-related quality of life (NEI-VFQ-39).

Results: Measurement of the outcome parameter “status of retinal pigment epithelium” failed. The pre-post comparison of changes revealed statistically significant visual improvement of the right eye (visual test: pre-post difference of mean: 0.08; 95%CI: 0.04 to 0.1; p=0.001). Visual acuity improved during the treatment period on the right side by 10% and on the left side by 7%. The patients recorded a statistically significant increase of quality of life by 8% (NEI-VFQ-39: Pre-post difference of mean: 5.9; 95%CI: 4.5 to 7.4; p<0.005). Based on the current state of studies the minimal clinical relevant difference of this questionnaire outcome is specified by an improvement of 5 to 10 points. The achieved improvement remained largely stable regarding the follow-up (n = 17). The main osteopathic dysfunctions were diagnosed in the parietal system; nearly all patients showed dysfunctions of the thoracic and cervical spine. In the visceral system the most prevalent dysfunctions were identified in the area of the thorax (mediastinum and pericard) and in the cranio-sacral system the fascia of the eye socket were affected by dysfunction in all cases.

Conclusion: Five osteopathic treatments over a period of ten weeks led to statistically significant and clinically relevant positive changes of visual acuity and disease-related quality of life in patients suffering from AMD. This pre-post study provided first indications leading to an effectiveness of osteopathic treatment. Further studies particularly in designs of higher quality (randomized controlled trials) are warranted.

Relationship between somatic dysfunction and pain perception in patients with frequent tension type headache following osteopathic treatment. A randomized controlled trial

Liria Papa, Ilaria Orioli, Alfonso Mandara (International College of Osteopathic Medicine – ICOM, presented by Matteo Tornaghi DO, MSc Ost, ERCOM

Objective: To assess the effectiveness of osteopathic treatment (OMT) on somatic dysfunctions and pain perception in patients with frequent tension type headache (TTH).

Materials and Methods: Patients with the diagnosis of TTH were randomly divided into two groups: OMT group (OMTG) received 4 treatments; sham group (SG) received assessment of the cranial rhythmic impulse, both in a study period of one month. All patients underwent to the osteopathic physical examination to collect the number of somatic dysfunction and completed a brief interview including duration and localization of TTH, the number of weekly attacks, and a numerical pain rating scale (NPRS).

Results: 39 patients were included in the analysis. At end of treatment, OMTG had a significant reduced of number of attacks (mean change score in OMTG: 3.00; 95%CI: 2.51 to 3.48; p<0.001 and SG: 0.105; 95%CI: -0.12 to 0.33; p=0.33), of NPRS (OMTG: 4.45; 95%CI: 3.62- 5.27; p<0.001; and SG: 0.21; 95%CI: -0.23 to 0.65; p=0.33), and of the number of dysfunction (OMTG: 3.0; 95%CI: 2.51 to 3.48; p<0.001 and SG: 0.21; 95%CI: -0.047 to 0.47; p=0.10). A significant effect of treatment was found on the decrease of pain intensity perception (F=75.07; p<0.001), number of attacks (F=28.87; p<0.001), and number of somatic dysfunctions (F=105.93; p<0.001). In OMTG, significant correlation was found only between NPRS and number of attacks (r=0.67; p=0.002).

Conclusions: These findings confirmed the benefit of OMT on TTH. The perception of pain was unrelated to the correction of biomechanical alterations suggesting a possible effect of OMT on central systems.

A multicenter, randomized, controlled trial of osteopathic manipulative treatment on preterms.

Francesco Cerritelli (Clinical-based Human Research Department, Centre for Osteopathic Medicine—C.O.ME. Collaboration, Pescara, Italy,)
Gianfranco Pizzolorusso , Cinzia Renzetti, Vincenzo Cozzolino, Marianna D'Orazio, Mariacristina Lupacchini, Benedetta Marinelli, Alessandro Accorsi, Chiara Lucci, Jenny Lancellotti, Gina Barlafante (Accademia Italiana Osteopatia Tradizionale, Pescara, Italy)
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Paola Fusilli, Carmine D'Incecco (Neonatal Intensive Care Unit—Pescara Public Hospital, Italy)
(presented by Nuria Ruffini, DO, C.O.ME. Collaboration)

Background: Despite some preliminary evidence, it is still largely unknown whether osteopathic manipulative treatment improves preterm clinical outcomes.

Materials and Methods: The present multi-center randomized single blind parallel group clinical trial enrolled newborns that met the criteria for gestational age between 29 and 37 weeks, without any congenital complication from 3 different public neonatal intensive care units. Preterm infants were randomly assigned to usual prenatal care (control group) or osteopathic manipulative treatment (study group). The primary outcome was the mean difference in length of hospital stay between groups.

Results: A total of 695 newborns were randomly assigned to either the study group (n= 352) or the control group (n=343). A statistical significant difference was observed between the two groups for the primary outcome (13.8 and 17.5 days for the study and control group respectively, p<0.001, effect size: 0.31). Multivariate analysis showed a reduction of the length of stay of 3.9 days (95% CI -5.5 to -2.3, p<0.001). Furthermore, there were significant reductions with treatment as compared to usual care in cost (difference between study and control group: 1,586.01 €; 95% CI 1,087.18 to 6,277.28; p<0.001) but not in daily weight gain. There were no complications associated to the intervention.

Conclusions: Osteopathic treatment reduced significantly the number of days of hospitalization and is cost-effective on a large cohort of preterm infants.

International Scientific Organising Committee

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