



Osteopathy today

10th International Congress of the German Osteopathic Association (VOD)

4th – 7th October 2007

Schlangenbad / Wiesbaden / Germany

Fourth International *Symposium* on Advances in Osteopathic Research

Saturday, 6nd October 2007

Programme and Abstracts

Presented by
the German Academy of Osteopathy (AFO)

08.30 – 08.45

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

08.45 – 09.15

Keynote lecture *Dr. John Licciardone, D.O., Osteopathic Research Center, USA*
 Evidence-based "OMTology"

09.20 – 10.20

Presentations Chair: *Prof. Rene McGovern, Prof. Dr. med. K. L. Resch*

Innovation in the pelvic manual inspection: Sacral intrinsic mobility palpation
Alfonso Lepori, International College of Osteopathic Medicine Milan, Italy

Osteopathic correction of intestinal dysbacteriosis of perinatal genesis in infants
Tatiana Kuts, Saint-Petersburg Institute of Osteopathic Medicine, Russia

Effects of standardization on cranial palpation as measured with a pressure device
Rafael Zegarra-Parodi, CEESO - Osteopathic Education Center, France

Osteopathic treatment for relief of chemotherapy-induced emesis in breast cancer patients
Barni Alice, Istituto Superiore di Osteopathia, Milan, Italy

Still's Fascia: A qualitative investigation to enrich the meaning behind Andrew Taylor Still's concepts of fascia. *Jane Stark (Canada)*

10.20 – 10.50

Coffee break

10.50 – 11.20

Keynote lecture *Prof. Dr. med. Karl-Ludwig Resch, D.O. h.c., Germany*
 Osteopathic Research in Germany: Real Life Challenges

11.25 am – 12.30

Presentations Chair: *Prof. Rene McGovern, Prof. Dr. med. K. L. Resch*

Osteopathic manipulative treatment of back pain and related symptoms during pregnancy: A randomized controlled trial
John Licciardone, (Osteopathic Research Center, University of North Texas, USA)

Osteopathic treatment of women suffering from urinary incontinence as a result of an injury to the perineum during delivery. A randomized controlled trial
Karin Gerhardt, STILL Academy, Germany

Do osteopathic treatments improve the symptoms of headache and/or sinus pressure in patients with chronic rhino sinusitis (CRS)? A randomized controlled trial
Uwe Steinbauer, COE - European College of Osteopathy, Germany

Study on the effectiveness of osteopathic treatment for women with persistent post partum back pain. A randomized controlled trial
Christina Recknagel, College Sutherland, Germany

Osteopathy as an effective treatment alternative to physical therapy for patients suffering from chronic non specific neck pain. A randomized controlled trial
René Tempel, Still Academy, Germany

Innovation in the pelvic manual inspection: Sacral intrinsic mobility palpation

Alfonso Lepori, Alfonso Mandara, Caterina Di Mattia, Liria Papa (International College of Osteopathic Medicine, Milan, Italy)

Objective: The clinical assessing of the mobility dysfunction in the sacroiliac joint is a controversial issue, due to a plethora of manual tests performed through the disturbance of nearby structures. The clinical reliability of those diagnostic methods is recurrently questioned by several authors. This experimental study has the objective to evaluate the diagnostic validity and the inter-tester reliability of the newly developed SIMP Test

Materials and Methods: The SIMP Test is a maneuver developed for the intrinsic topographical mobility detection of the sacroiliac joint. Its competitive advantage resides in the relaxed prone position of the patient, method allowing a bypass of external influences, being the cause of bias in the mobility detection and diagnostic results; nonetheless the central position of the operator allows a close contact and a ligamentous release, so a palpation of the short and the long arm of the articulation, assessing it with one single, rapid and simple action. The validity of the dia-

gnostic results has been tested on 24 articulations in a blind study performed by two osteopaths during two separated times. Seven patients affected by ankylosing spondylitis and five normal subject were randomized. Results were compared with the gold-standard subjects' plain radiographs.

Results: The SIMP Test gave a sensitivity of 100%, a specificity of 85,7%, a positive predictive value of 100% and 83,3% negative predictive value. The inter-tester reliability showed a very good agreement with a k of 0,833.

Conclusion: SIMP Test, reaching high diagnostic value and very good inter-tester reliability, clearly demonstrate its value in detecting joint mobility, though this can yet not be generalized. Further investigations will try to widen the number of detected sacroiliac joint, extended to other pathological groups of patient and focused on qualitative palpation parameters.

Osteopathic correction of intestinal dysbacteriosis of perinatal genesis in infants

Tatiana Kuts (Saint-Petersburgh Institute of Osteopathic Medicine, Russia)

Objective: The importance of normal intestinal microflora as a factor of healthy development of human organism starting with the first day of life and the extent to which the abnormalities of intestinal biocenosis are spread among children of early age makes important the search for the new efficient methods of correction of intestinal dysbacteriosis in infants. The goal of the research was comparative analysis of efficiency of osteopathic vs. allopathic methods of correction of intestinal dysbacteriosis of perinatal genesis (such as birth trauma or chronic pre-natal hypoxia) in infants.

Materials and Methods: In order to achieve the goal of the research we performed complex examination (including anamnesis analysis, clinical status, osteopathic status and bacteriological examination) and treatment of 30 mature-born breastfeed infants at the age of 1-7 months with intestinal dysbacteriosis of 1st and 2nd degree, all having indications of perinatal risk factors. All infants were split into primary and control group, 16 and 14 infants accordingly. Both groups had similar representation by age, sex and results of initial examination. In primary group infants were given osteopathic treatment only; in control group

infants were given allopathic treatment only, which included selective decontamination with bacteriophages and colonization of intestines with normal symbionts by probiotics.

Results: Based on the results of repetitive bacteriological examination we measured the duration of correction till intestinal microflora was normalized. It was statistically proven that those infants treated with osteopathic methods of correction recovered 1,5 - 2 times faster than those treated with allopathic methods of correction. In infants with intestinal dysbacteriosis of 1st degree intestinal microflora normalized in $40,25 \pm 3,35$ days in primary group vs. $94,5 \pm 3,50$ days in control group ($P < 0,00003$). In infants with intestinal dysbacteriosis of 2nd degree intestinal microflora normalized in $121,25 \pm 3,19$ days in primary group vs. $182,6 \pm 4,95$ days in control group ($P < 0,00003$).

Conclusion: As a result of the research it was demonstrated that the osteopathic method of correction of intestinal dysbacteriosis of perinatal genesis in infants was more efficient than the allopathic method. Osteopathic method allows acting upon the root cause of the problem.

Effects of standardization on cranial palpation as measured with a pressure device.

Rafael Zegarra-Parodi, Pierre de Chauvigny, E.O. Renard (CEESO – Osteopathic Education Center, France)

Objective: To provide data for pressure palpation used for cranial palpation with a pressure device (Flexiforce®). To determine the effects of standardization between practitioners trained and not trained before the cranial palpation measures.

Materials and Methods: 36 asymptomatic Master students (22 female/ 14 male; mean age $24,6 \pm 4,4$ years) were included in this study and were not excluded for any past or current clinical conditions. They were randomly assigned in 3 different groups: 12 volunteers, 12 standardized practitioners (trained again for cranial palpation just before the study) and 12 not standardized practitioners. All practitioners were then asked to palpate the left fronto-malar suture using their usual pressure needed for the evaluation of somatic dysfunction's presence. The same operator placed the Flexiforce® on the 12 volunteers and recorded the pressure during the first 2 seconds of the test.

Results: The pressure used for the left fronto-malar suture's evaluation ranged from 13,5 grams to 81,3 grams during the test. The average pressure used for the test ranged from $19,92 \pm 3,76$ grams to $64,14 \pm 9,31$ grams. There were no statistical difference ($p=0,32$) between the pressure used by standardized practitioners (40,0 grams) and by not standardized practitioners (38,4 grams).

Conclusion: This study is one of the first to provide data for the pressure palpation used during osteopathic cranial evaluation and their future role for students training. The absence of statistical difference between standardized and not standardized practitioners could be challenged in the future by using a more appropriate pressure device for such low pressures and the recruitment of patients with specific clinical conditions.

Study on the effectiveness of osteopathic treatment for women with persistent post partum back pain. A randomized controlled trial.

Christina Recknagel, Jennifer Roß (College Sutherland, Germany)

Objective: The aim of the study was to investigate whether osteopathic treatments had an effect on women with persistent unspecific post partum back pain. This study was designed as a randomized controlled trial using a "waiting list design".

Materials and Methods: Forty women (average age 34.5) with unspecific back pain post partum participated in the study, whereby the back pain had to be present at least three months but not longer than 24 months, and in connection with pregnancy or birth. Twenty women were randomly allocated to the treatment group and twenty to the control group. The treatment group received four osteopathic treatments over an eight-week period. The women in the control group remained untreated during this period. A follow-up was conducted six weeks after completion of treatment. Diagnosed osteopathic dysfunctions were treated according to the principles of osteopathy. The main outcome measures were firstly subjectively felt pain intensity, quantified by a visual analogue scale (VAS), secondly the effect thereof on the daily lives of the patients measured with the Oswestry Pain Questionnaire (OPQ).

Results: In a direct comparison between treatment group and control group there was a statistic significance in the pain inten-

sity, as well as in the OPQ ($p < 0.001$, 95% CI = -33.8 to - 57.6 and $p < 0.001$, 95% CI = -11.6 to -23.8). In the treatment group the intensity of the pain measured on the VAS decreased from 68.3 to 20.6, which corresponds to an improvement of 70% ($p < 0.001$, 95% CI = -36.5 to -58.8). The control group improved only minimally (3.4%, $p = 0.383$). Similar results were shown concerning daily-life restrictions. For the osteopathically treated group, measurements from the Oswestry Pain Questionnaire (OPQ) improved on average by 17.4 points, which corresponds to 62% ($p < 0.001$, 95% CI = -11.6 to -23.8); the control group showed a deterioration of 0.4 points. The possible impact of external factors on these results was taken into consideration by use of a sensitivity analysis which showed no noticeable impact. In the follow-up 6 weeks after the end of treatment, a further improvement of the symptoms was noted.

Conclusion: This study shows that osteopathic treatment for women with persistent, unspecific backache post partum brings about a clinically relevant improvement of the pain symptoms, and a reduction of the impediment on daily life. Positive effects from osteopathic treatment may bring new hope to women suffering from severe pain, that in the future they and their plight may be recognised and taken seriously.

Still's Fascia: A qualitative investigation to enrich the meaning behind Andrew Taylor Still's concepts of Fascia.

Jane Stark (Canada)

Objective: 1) To gain an in-depth understanding of A.T. Still's concepts of fascia.
2) To reveal how a sample of experienced Osteopaths understands Still's concepts of fascia.
3) To compare the Osteopath's understanding of Still's concepts of fascia to Still's concepts of fascia.
4) To state the significance is a difference is found between Still's concepts of fascia and the Osteopaths' understanding of Still's concepts of fascia.

Materials and Methods: Four research questions were addressed by using historical/documentary and field qualitative research methods in the form of literature-based and interview-based methods respectively. The literature that was reviewed included all material written by Still, both published and non-published. It also covered what Still was known to have read as well as everything written about him.

For the interview-based portion, 37 Osteopaths and osteopathic physicians, each with a minimum of 20 years experience in a manual-based practice were interviewed using an unstructured interview design. They were each asked approximately 20 open-ended questions about Still, their views on fascia, and their views

on Still's concepts of fascia. The data from all sources was analyzed and synthesized using a qualitative research method known as emersion/crystallization.

Results: 1) Andrew Taylor Still interchanged the words fascia and membrane, meaning that he used the term fascia for both epithelia tissue as well as connective tissue.
2) Statements such as "by its [fascia's] action we live, and by its failure we shrink, or swell and die" hold a more enriched meaning when one considers that Still quite frequently referred to the epithelia linings of the digestive, pulmonary, and urogenital systems as fascia. 3) The sample of Osteopath's showed a wide range of responses to how they understand fascia.
4) The sample of Osteopaths showed an overall inconsistency in their understanding Still's concepts of fascia.
5) As a result of 3) and 4), - the question, how should Osteopaths teach fascia to the students? - was asked.

Conclusion: Still's interchanging of the words fascia and membrane could positively alter the manner in which osteopaths conceptualize and treat fascia, and thus patients. In order for this change to occur the osteopathic profession would benefit from a renewed understanding of Still, especially in the area of fascia.

Osteopathic treatment for relief of chemotherapy-induced emesis in breast cancer patients.

Alice Barni, C. Althaus (Istituto Superiore di Osteopathia, Milan, Italy) M. Cabiddu, M. Cazzaniga, G. Cavalieri, M. Riccardi, L. Sonetti, S. Barni (Medical Oncology, Treviglio Hospital, Bergamo)

Objective: Evaluation of acute and delayed emesis after osteopathic treatment; evaluation of quality of life and toxicity of osteopathy.

Materials and Methods: From January 2005 to October 2005 we enrolled 15 women between 29 and 71 of age, with breast cancer treated with chemotherapy. They were randomized to receive osteopathic treatment or placebo (osteopathic) in association with antiemetic drugs. We used three different evaluation scales: VAS, drawn up at the 1st day of chemotherapy to evaluate acute emesis, and at the 4th day to evaluate delayed emesis; EORTC QLQ-C30 quality of life; WHO/CTC-NCI scale for toxicity evaluation.

Results: All patients showed an important improvement of the symptoms both at the 1st (VAS: $p = 0,00013$) and at the 4th day (VAS: $p = 0,00001$); reducing symptoms flow into a better quality of life ($p = 0,0017$) without any toxicity for the patient. High significance of t-test ($p < 0,01$) proves the efficaciousness of osteopathic treatment in reducing nausea and vomiting, mostly delayed emesis, in improving quality of life without toxicity for patients.

Conclusion: Used in conjunction with current antiemetic drugs, osteopathic treatment has been shown to be safe and effective for relief of the nausea and vomiting resulting from chemotherapy, also improving quality of life of the patients.

Osteopathic treatment of women suffering from urinary incontinence as a result of an injury to the perineum during delivery. A randomized controlled trial.

Karin Gerhardt, Gaby Montag (STILL Academy, Germany)

Objective: The main objective of this study is to evaluate whether osteopathic treatment in addition to the standard therapy of “pelvic floor muscle training” can significantly improve the overall quality of life of women suffering from urinary incontinence as a result of an injury to the perineum during delivery, designed as a randomized controlled trial.

Materials and Methods: Sixty women (average age 37.5 years) diagnosed by their gynaecologists as suffering from urinary incontinence took part in the study. By means of external randomisation 30 women were assigned to the intervention group, 30 women to the control group. The intervention group received 4 osteopathic treatments in intervals of 3 weeks in addition to the pelvic floor muscle training with exercises to be carried out at home regularly for the following intervention time of 12 weeks. The control group received the same introduction of pelvic floor muscle training. Osteopathic dysfunctions individually diagnosed in the visceral, parietal and cranio-sacral system were treated based on osteopathic principles. Primary outcome parameter was measured by means of the King's Health Questionnaire (KHQ).

Results: The total score of the KHQ could only be measured for about 40 patients because of missing values. In the intervention group the symptom-specific quality of life had significantly improved by the end of the treatment, from 34% to 19% which constitutes an improvement of 44% ($p < 0.0005$; 95% CI=8.6 to 21.4). The improvement in the control group was less evident with 31% ($p=0.011$; 95% CI=2.6 to 16.6). The direct comparison of both groups did not show any statistical significance in favour of one group ($p=0.24$; 95%CI=-3.7 to 14.6). To allow evaluation of the total number of 60 patients the missing values were filled in by using an average value or the worst possible value. The total score of the KHQ then showed statistical significance in favour of the osteopathic group.

Conclusion:

Four osteopathic treatments in intervals of 3 weeks in addition to pelvic floor muscle training had a clinically relevant influence on the symptom-specific quality of life of women with urinary incontinence following an injury of the perineum.

Do osteopathic treatments improve the symptoms of headache and/or sinus pressure in patients with chronic rhino sinusitis (CRS)? A randomized controlled trial.

Sanja Roos, Uwe Steinbauer, Peter Amann (COE - European College of Osteopathy, Germany)

Objective: To investigate whether osteopathic treatments improve the symptoms of headache and/or sinus pressure in patients with chronic rhino-sinusitis (CRS).

Materials and Methods: A randomized controlled interventional trial which compares an osteopathic group ($n=31$ / 5 treatments at intervals of two weeks) and a control group ($n=30$ / not treated for 10 weeks, then 5 treatments at two-week intervals). A follow-up was conducted 4 months after completion of treatment. Main outcome measures were the subjectively felt headache and/or sinus pressure measured via numeric rating scale (NRS). Overall symptomatology was assessed using the Sinonasal Assessment Questionnaire (SNAQ-11). Treatment was given based on individual patient findings.

Results: A direct comparison between the osteopathic and control groups using the primary parameter of “intensity of headache and/or sinus pressure” produced a statistical significance in favour of the osteopathic group ($p=0.039$, 95% CI=-3.2 to -0.1

and $p=0.002$, 95% CI= -3.3 to -0.3 respectively). During the course of the study (beginning/end), the osteopathic group reported an improvement in subjectively felt headaches from 3.2 to 1.7 on the NRS (47%, $p=0.011$, 95% CI=0.37 to 2.60) and an improvement in sinus pressure from 3.7 to 2.1 (43%, $p=0.002$, 95% CI=0.61 to 2.55), in contrast to the control group, who reported slightly worsened symptoms. The parameter “frequency of headache and/or sinus pressure” also displayed a statistical significance ($p=0.001$) between the two groups in favor of the osteopathic group. The SNAQ-11 also exhibited a similar trend. A follow-up of all patients treated ($n=51$) 4 months after completion of the last patient's treatment confirmed the sustainability of the treatment method with an additional slight improvement in the results.

Conclusion: The positive evidence for the effectiveness of osteopathic treatments for patients with CRS found by this study is promising. Five osteopathic treatments had a clinically relevant bearing on overall symptomatology and pain in CRS.

Osteopathy as an effective treatment alternative to physical therapy for patients suffering from chronic non specific neck pain. A randomized controlled trial.

Stefanie Steffen, René Tempel (Still Academy, Germany)

Objective: The main objective of this study was to assess the effectiveness whether osteopathic treatment influences the pain of patients with chronic non-specific neck disorders in comparison to physiotherapy. A randomized controlled trial was conducted.

Materials and Methods: Sixty patients with chronic neck disorders participated in the trial (42 women, 18 men, on average 40 years old). The symptoms had to be present for at least three months (VAS \geq 40%). 31 Patients were randomly allocated to be given osteopathic treatment (intervention group) and 29 patients to physiotherapy (control group). The patients of the intervention group received five osteopathic treatments in two-week intervals. The patients of the control group received on average 18 physiotherapeutic sessions over a nine-week period. A three-month follow-up was included. The osteopathic dysfunctions in the visceral, parietal and cranial system were diagnosed each treatment session and treated individually. The primary parameter was pain, subdivided into intensity, duration and frequency. The pain intensity was measured by a visual analogue scale (VAS). Pain duration and frequency were recorded by Likert-Scales. The secondary parameters were quality of life (SF-36) and interference of daily activities (Nordic questionnaire).

Results: During the treatment period the average pain intensity in the intervention group was reduced from 42% to 19%, which corresponds to an improvement of 54% ($p < 0.0005$, 95% CI=18.5 to 26.8). In the control group there could be demonstrated an improvement too, but corresponding to a smaller degree (34%, $p < 0.0005$, 95% CI=11.8 to 18.8). The comparison between the two groups demonstrated a statistical significance ($p < 0.013$, 95% CI=2.2 to 12.9). The statistical analysis referred to the parameters "present pain" and "maximum of pain" showed similar results. Quality of life (SF-36) was improved by 31% in the intervention group and 21% in the control (both $p < 0.0005$). The three-month follow-up showed that the improvement in the intervention group retrained whereas the pain intensity in the control group worsened by 22%.

Conclusion: Five osteopathic treatments over 10-week period could cause a clinically relevant influence on pain and quality of life in patients with chronic neck disorders. Compared with physiotherapy a superiority of osteopathic treatment could be suggested. These results confirm the findings of the study of Bischoff et al. (2002). Osteopathic treatment appears to be an appropriate therapy for patients suffering from chronic neck disorders.

Osteopathic manipulative treatment of back pain and related symptoms during pregnancy: A randomized controlled trial.

John C. Licciardone (Osteopathic Research Center, University of North Texas Health, USA)

Objective: To study the effects of osteopathic manipulative treatment (OMT) of back pain and related symptoms during the third trimester of pregnancy.

Materials and Methods: A randomized, double-blind, placebo-controlled trial was conducted in an academic health center from July 2003 through December 2005. Trial details are available at <http://clinicaltrials.gov/ct/show/NCT00298935?order=4>. Patients were randomized to receive usual obstetrical care and OMT (UOBC+OMT), usual obstetrical care and sham ultrasound treatment (UOBC+SUT), or usual obstetrical care only (UOBC only). Outcome measures included typical or average pain levels, the Roland Morris-Disability Questionnaire (RMDQ), and the SF-12 Health Survey (SF-12).

Results: A total of 49, 48, and 49 subjects were randomized to the UOBC+OMT, UOBC+SUT, and UOBC only groups, respectively. There was a significant increase in RMDQ scores over time ($P = .01$)

with a highly significant treatment group x visit interaction effect ($P < .001$). Significant deterioration in back-specific functioning was observed in both the UOBC+SUT (mean change, 0.23 RMDQ units per week; 95% CI, 0.08 – 0.37 RMDQ units per week) and UOBC only (mean change, 0.47 RMDQ units per week; 95% CI, 0.29 – 0.66 RMDQ units per week) groups, but not in the UOBC+OMT group (mean change, 0.07 RMDQ units per week; 95% CI, \geq 0.05 – 0.18 RMDQ units per week). Although there were no significant differences between treatment groups, back pain levels decreased over time in the UOBC+OMT group, remained unchanged in the UOBC+SUT group, and increased in the UOBC only group. There were no significant differences among treatment groups in SF-12 generic health outcomes.

Conclusion: Osteopathic manipulative treatment slows the deterioration of back-specific functioning during the third trimester of pregnancy.

International Scientific Organising Committee

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