Osteopathy today

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Second International *Symposium* on Advances in Osteopathic Research

Saturday, 1 October 2005

Programme and Abstracts

Presented by
the German Academy of Osteopathy (AFO)

AFO AKADEMIE FÜR OSTEOPATHIE

Programme

08.30 – 08.45 am	**Opening**	*Marina Fuhrmann, President of the German Osteopathic Association (VOD)* *Florian Schwerla, German Academy of Osteopathy (AFO) Research Commission*
08.45 – 09.25 am	**Keynote lecture**	*Michael Patterson,Nova Southeastern University, Florida, USA* Towards a Philosophy of Osteopathic Research
09.30 – 10.30 am	**Presentations**	Chair: *Michael Patterson, Karl L. Resch*

Attitudes to back pain amongst musculoskeletal practitioners: differences between professional groups and practice settings using the Attitudes to Back Pain Scale - Musculoskeletal Practitioners (ABS-mp)
Steven Vogel, British School of Osteopathy, London, UK

Reliability of the lengthening-shortening test to evaluate sacroiliac joint region dysfunction
Paul Vaucher, Swiss School of Osteopathy, Research Department, Lausanne, Switzerland

The Effectiveness of Muscle Energy Technique (MET). A systematic review.
Helge Franke, Gemany

Can patients, suffering from Dyspareunia, expect improvement from an osteopathy treatment? A controlled and prospective trial
Andrea Hoffmann, European College of Osteopathy, Germany

Role of the osteopath in the treatment of secondary lymphedema of the upper limb
Jean-Paul Belgrado, Laboratory for science of motricity, University of Brussels, Belgium

10.30 – 11.00 am	**Coffee break**

11.00 – 11.40 am	**Keynote lecture**	*Rene McGovern, Kirksville College of Osteopathic Medicine, USA* Evidenced-Based Medicine: A Roadmap for Clinical Decision Making
11.40 am – 0.30 pm	**Presentations**	Chair: *Rene McGovern, Karl L. Resch*

"Cranial" State of Mind - Does cranial osteopathy influence the patient's state of consciousness?
Raimund Engel, Vienna School of Osteopathy, Austria

How effective are osteopathic treatments to patients with gonarthritis in comparison to the two most current forms of treatment namely physiotherapy and medication. A randomized controlled trial.
Martin Auracher, Osteopathy Academy Munich, Germany

Does an osteopathic treatment have an influence on the symptoms of patients with a chronic abacterial prostatitis/chronic pelvic pain syndrome (CPPS)? A randomized controlled trial.
Sylvia Marx, College Sutherland, Germany

Osteopathic treatment of somatoform autonomic dysfunction of the cardiovascular system. A controlled clinical trial.
Marc Zorgman, Still Academy, Germany

Attitudes to back pain amongst musculoskeletal practitioners: differences between professional groups and practice settings using the Attitudes to Back Pain Scale - Musculoskeletal Practitioners (ABS-mp)

Steven Vogel (British School of Osteopathy, London, UK)
T. Pincus (Department of Psychology, Royal Holloway University of London, UK)
N.E. Foster (Primary Care Sciences Research Centre, Keele University, Staffordshire, UK)
A.C. Breen (The Institute for Musculoskeletal Research and Clinical Implementation, Bournemouth, UK)
M. Underwood (Centre for Health Sciences, Bart's and The London, London, UK)

Objective: The purpose of this study was to investigate the differences between the attitudes to low back pain (LBP) of three professional groups: chiropractors, osteopaths and musculoskeletal physiotherapists.
Materials and methods: A cross-sectional questionnaire survey (n=900), using the ABS-mp.
Results: 61% of the sample responded (n=546), after exclusion of outliers and missing values, 465 were used in the final analysis. 132 were chiropractors (28.4%), 174 were musculoskeletal physiotherapists (37.4%) and 159 were osteopaths (34.2%). Significant differences were found across the groups for the subscales of the ABS-mp. Musculoskeletal physiotherapists tend to endorse limiting the number of treatment sessions offered to LBP patients greater than both osteopaths (p =.000; effect size d =1.3), and chiropractors (p =.000; effect size d =2.18), but osteopaths limit sessions more than chiropractors (p =.000; effect size d =0.9). Musculoskeletal physiotherapists work more clearly within a re-activation, as opposed to a biomedical approach than their colleagues in the either of the other two professional groups. More confidence and concern about treatment and clinical limitations in themselves and others was shown by osteopaths compared to physiotherapists (p=.005; effect size d=.36). When practice setting (National Health System ((NHS)) versus private practice) was considered, the differences in limitations on sessions and in biomedical orientation become less marked.
Conclusion: Aspects associated with practice settings, and especially those concerned with working within the NHS or privately impact on practitioners' attitudes. There are also some professional differences, indicating that physiotherapists hold attitudes more closely in line with current guidelines for the management of acute low back pain.

Reliability of the lengthening-shortening test to evaluate sacroiliac joint region dysfunction

Paul Vaucher, J. Rippstein, T. Tinturier (Swiss School of Osteopathy, Research Department, Lausanne, Switzerland)

Objective: To determine whether a quantitative mobility test of the sacroiliac joint, also known as Downing's test, is reliable enough to be clinically useful.
Sacroiliac joint tests are commonly used for the diagnosis of sacroiliac joint dysfunction (SIJD) despite the fact that most dynamic and structural palpation tests appear to be unreliable. A test-retest study was planned to evaluate intrarater and interrater reliability of the lengthening-shortening test.
Materials and methods:
A convenience sampling method was used to find 6 volunteer patients with sacroiliac syndrome. Intraclass correlation coefficients were calculated by testing six times both joints by one rater for intrarater reliability and five times by five raters for interrater reliability. Three different measuring methods were used to evaluate effects of each test: a measuring tape, a caliper rule and a specific device designed for the study.
Results: Data showed poor intrarater reliability for the lengthening test (ICC=0.47; CI=95%: 0.23-0.75) and for the shortening test (ICC=0.37; IC=95%: 0.09-0.70). Interrater reliability was worse with respectively an ICC=0.11 (CI=95%: -0.03-0.39) and an ICC=0.02 (CI=95%: -0.11-0.32). Furthermore functional lengthening or shortening of lower limb were not more important on painless joints than on those considered to be painful.
Conclusion: Results of this study do not justify the use of lengthening-shortening test to detect abnormal sacroiliac joint play.

The Effectiveness of Muscle Energy Technique (MET). A systematic review.

Helge Franke (Osteopath, Gemany)

Objective: The purpose of this review was to evaluate the evidence for the effectiveness of Muscle Energy Technique in Osteopathic Medicine
Search Strategy: General computerized databases (MEDLINE, EMBASE and COCHRANE) were searched for information about trials as well as specialized osteopathic databases (OSTMED, OSTEOPTHIC RESEARCH WEB). In addition, bibliographies from German and English Journals were considered, authors contacted and additional information about published and unpublished trials concerning MET was collected.
Data Analysis: Specification of the clinical and methodological parameters in all studies. Description of the internal and external validity in the published studies on the bases of the Consort statement.
Results: All in all twenty-three trials on MET could be found. 9 trials were published (5 RCTs and 4 non-randomized trials) while 14 were not (5 RCTs, 7 non-randomised trials, 2 studies on basic research) The methodological quality of the evaluated studies varied greatly.Twenty-one trials showed that mobility had improved. Only six studies (2 RCT`s, 4 non-randomized) confirmed that treatment had been therapeutically effective with regard to the isometric variant of MET on outcome parameters like pain and reduced mobility. Normally only one treatment was assessed, except for three trials, which used 7 to 8 treatments that were administered in a period of four weeks.
Conclusion: The effectiveness of MET has increasingly been tested over the last few years. There is a need to conduct extensive RCTs that examine the effects of MET (on clinically relevant outcome) for patients with clearly defined symptoms who are then treated several times over a longer period. Currently, there is little evidence for the effectiveness of therapeutic treatment with isometric MET in Osteopathic Medicine.

Can patients, suffering from Dyspareunia, expect improvement from an osteopathy treatment? A controlled and prospective trial.

Andrea Hoffmann (European College of Osteopathy, Germany)

Objective: Up to 60 % of all women suffer from dyspareunia, and very often diagnosis and treatment are not satisfactory. The main objective of this study was to investigate whether an osteopathic intervention can positively influence dyspareunia. Therefore a controlled, prospective trial in the form of a 'waiting-list-design' was conducted.
Materials and methods: 28 women from age 21 to 45 participated in the trial. After a baseline assessment followed by an interval of eight weeks without intervention eight osteopathic interventions were performed within a total period of 14 weeks. Main outcome criteria were intensity of pain experienced during sexual intercourse, measured on a Visual Analogue Scale (VAS).
Secondary outcome criteria were quality of life (assessed with a commonly used generic instrument, the MOS SF-36 questionnaire) as well as a questionnaire on further physical discomfort the patients might have experienced. Changes during the waiting list period were compared with those during osteopathic intervention.
Results: While no relevant changes in any outcome parameter could be observed during the waiting list period, intensity of pain significantly dropped during osteopathic treatment from 71 % to 34 %, (median, p=0.0002). Also, quality of life increased notably during treatment, e.g. the components "physical pain" by 20 %, "vitality" by 5 % and the "general well-being" by 8 %. In addition, all other complaints of the patients improved.
Conclusion: The holistic approach of the osteopathic intervention had a positive impact on women suffering from dyspareunia. Based on these positive results it is recommended to consider osteopathy as a promising tool for diagnostics and treatment. These findings will have to be substantiated by further (randomized controlled) trials.

Role of the osteopath in the treatment of secondary lymphedema of the upper limb

Jean-Paul Belgrado (Laboratory for science of motricity, dpt. physical rehabilitation, University of Brussels, Belgium, Still Academy Germany)
V. Feipel, M. Rooze (Laboratory for Functional Anatomy, University of Brussels, Belgium)
J. Rysman (European Medical Center, Brussels, Belgium)
P. Seghers, P. Verdonck (Hydraulics Laboratory, Institute Biomedical Technology, Ghent University, Belgium)

Background: International guide-lines recommend the use of techniques like manual lymphatic drainage and multi-layer bandages for women developing lymphedema after breast cancer The aetiology of post-mastectomy edema depends not only on surgical interruption of axillary lymphatic ways, but rather on excision of adipose tissue.
Objective: Research is founded on the hypothesis that fat tissue dissected with axillary lymphnodes plays a functional role in fluid biomechanics of the axillary vein. Knowing that the "stagnation" inside that vein is partly responsible for edema, we tried to find out whether dysfunctions of the shoulder complex could possibly influence negatively the edema. In this context it would be of high interest to find out whether an osteopathic treatment of that area could help.
Materials and methods: 6 axilla of female human cadavers. The humeral and subclavia vein were each catheterised by a tube equipped with tap. The "humeral" tube was connected to an upstream recipient and flow of water in the "subclavian" was measured in different abduction positions before and after post-mortem axillary-adenectomy (realized by an experimented surgeon).
Results: The axillary-vein-water-flux was significantly diminished after "post mortem adenectomy". The elevation of the shoulder restored the relative normal flux.
Conclusion: The adipous tissue excised with the lymphnodes has an important biomechanical role in the hemodynamic of the axillary vein and thus in the constitution of a lymphedema of the upper limb.
An osteopathic treatment could be helpful in the management of secondary lymphedema by analysing the shoulder's behaviour and release possible dysfunctions of the upper thoracic aperture and scapulo-humeral complex in order to re-establish the hemodynamics of the axillary vein, studies which still need to be carried out.

"Cranial" State of Mind - Does cranial osteopathy influence the patient's state of consciousness?

Raimund Engel (Vienna School of Osteopathy, Austria)

Objectives: Many patients - while or after a treatment with cranial osteopathy - report changes in awareness, perception or emotions. The project's aims were to find out, whether the described effect is measurable.
Materials and methods: An experimental design with 46 healthy subjects in three groups was used. Group E was treated by an osteopath using a cranial technique, group C1 was treated by a non-osteopath, using a sham technique, group C2 was lying still with eyes closed. During the experiment subjects' heart rate and heart rate variability (HRV) were measured to observe possible physiological concomitants of a shift in consciousness. After the experiment subjects filled out the Phenomenology of Consciousness Inventory (PCI) to quantify their state of consciousness in 12 dimensions.
Results: Differences between groups were found in the PCI's dimensions altered state of awareness ($p<0.01$), altered experience, perception, time sense, positive affect, joy, and internal dialogue ($p<0.05$). The decrease in HR during the experiment was significantly higher in group E. No significant difference could be found in HRV.
Conclusion: The results indicate that the applied cranial technique induced an altered state of consciousness (ASC) associated with positive affect in the subjects. This ASC and the concomitant decrease in HR were significantly stronger than in groups C1 and C2. The results seem to back osteopathy's claim of being a holistic approach and bear several implications for patient handling while and after an osteopathic treatment.

How effective are osteopathic treatments to patients with gonarthritis in comparison to the two most current forms of treatment namely physiotherapy and medication. A randomised controlled trial.

Martin Auracher (Osteopathy Academy Munich, Germany)

Objective: Osteoarthritis of the knee joint is one of the most common degenerative joint diseases of the locomotor system. A clinical randomised trial has been carried out to investigate how effective (with respect to a reduction of pain-levels and an increase in activities of daily life) are osteopathic treatments to patients with gonarthritis in comparison with the two most current forms of treatment, i.e. physiotherapy and medication.
Materials and methods: Sixty patients with grade 2 or grade 3 gonarthitis diagnosed by means of clinical tests und X-ray examinations were randomised into three groups. Over a period of six weeks, patients received either 6 osteopathic treatments, or 6 physiotherapy treatments or a standard course of medication with non-steroidal anti-inflammatory drugs (NSAIDs). Improvement of pain and mechanical dysfunction was assessed with the WOMAC-Arthritis index and quality of life with the MOS SF-36 questionnaire.
Results: Significant improvements were observed with all three treatment methods. Positive changes of the WOMAC-score (pain, stiffness, functional disorder), were most pronounced in the osteopathic group with 35 % ($p< 0.000$), as compared to the physiotherapy group with 25% ($p= 0,003$) and the NSAIDs group with 14 % ($p= 0,040$). Between-group differences of longitudinal changes, however, did not reach the level of statistical significance. The body summation score of the SF-36 questionnaire improved in a similar way (16 %, 12%, 9%, $p< 0,05$ for longitudinal changes in any group).
Conclusion: All three treatment methods were associated with positive changes in patients with osteoarthritis of the knee joint. An osteopathic treatment was at least as effective as any of the two standard interventions, and Clinical outcome as assessed by two commonly used instruments can be rated clinically meaningful and individually relevant, as confirmed by an impressing "number needed to treat" of 3.3 (improvement of 10 points in the WOMAC score).

Does an osteopathic treatment have an influence on the symptoms of patients with a chronic abacterial prostatitis/chronic pelvic pain syndrome (CPPS)? A randomized controlled trial.

Sylvia Marx (College Sutherland, Germany)

Objective: Prostatitis is the most frequent urological complaint diagnosed in men under 50. As bacteria are found in less than 5% of all cases, one is dealing chiefly with chronic abacterial prostatitis. The symptoms seem to be multifactorial so that conventional therapies rarely lead to an improvement.
This study was designed as a randomized controlled trial to test, whether osteopathic interventions may be effective in alleviating the symptoms of chronic abacterial prostatitis (CAP)/chronic pelvic pain syndrome (CPPS).
Materials and methods: Thirty-four patients with defined CAP were recruited and randomized in two groups. The treatment group (20 patients) received 5 osteopathic treatments over a period of 8 weeks. The control group (14) had to do a mixture of gymnastic and physiotherapeutic exercises as a 'sham treatment'. Main outcome parameters were the improvement of lower urinary tract symptoms (International Prostatitic Symptoms Score IPSS), the chronic pelvic pain (National Index of Health-Chronic Prostatitis Symptom Index) and the quality of life.
Results: A comparison of the osteopathic group and control group showed in all the parameters statistically significant differences to the advantage of the osteopathic group ($p< 0.000$). Over the whole period the IPSS of the osteopathic group improved by 48% ($p= 0.0000$), the Chronic Prostatitis Symptom Index by 51% and the quality of life by 58%. In contrast, the values of the control group stayed to a large extent constant. In the follow-up, 6 weeks after the last treatment, the positive effects of the osteopathic treatment had been sustained.
Conclusion: A series of osteopathic interventions seems a promising therapeutic regimen for CAP sufferers. Further studies will have to demonstrate whether these findings are reproducible.

Osteopathic treatment of somatoform autonomic dysfunction of the cardiovascular system

Susanne Sauerburger, Marc Zorgman (Still Academy, Germany)

Objective: Functional cardiovascular dysfunctions are among the most common illnesses. We are concerned here with patients who often show strong cardiovascular symptoms even though no organic problems can be diagnosed in medical examinations.
A controlled intervention study based on the waiting list design was used to address the question of whether the osteopathic treatment of patients with somatoform autonomic dysfunctions of the cardiovascular system (CFD) improves the symptoms.
Material and methods: Participating in the study were thirty patients aged between 20 and 50 years with CFD. Having had no treatment over the previous six weeks, the participants received three osteopathic treatments in course of the study. These treatments were given at fourteen-day intervals. In the evaluation we compared the treatment-free period with the period of osteopathic treatments. The primary parameters were the patients' self-evaluation of their physical symptoms and changes in those symptoms as measured using a SOMS questionnaire (Screening for Somatoform Symptoms). The secondary parameters were the intensity of the pain measured against the visual analogue scale and the frequency of occurrence.
Results: A direct comparison between the waiting period and treatment period revealed a statistical significance in favour of osteopathic treatment (p= 0.000). Clinically relevant improvements were recorded over time. Depending on the evaluation method, the SMOS scores ranged from 44% to 59% (p= 0.000). The secondary parameters also showed this positive trend, with intensity of the complaints falling by 71% and their frequency by 47%.
Conclusion: Just three osteopathic treatments over a period of six weeks resulted in a positive impact on CFD. Further randomised controlled studies are needed, and the sustainability of the successful treatment should be monitored with a follow-up study.

Osteopaths' attitudes to and experience of research: A national survey in the UK.

Steven Vogel, K. Nash (British School of Osteopathy, London, UK)
T. Pincus (Department of Psychology, Royal Holloway, University of London, UK)
A. Moore (Clinical Research Centre for Health Professions, University of Brighton, UK)

Objective: We set out to investigate priorities, career issues and experience of and barriers to research as perceived by osteopaths in the UK.
Materials and methods: We designed a questionnaire drawing on a published instrument and adding additional scales to measure respondents' attitudes to research in their career and current priorities for research in osteopathy. The instrument was piloted regionally and with an expert panel. We performed a cross sectional national population survey of osteopaths in the UK (n=3019) with one follow-up for non-responders.
Results: Our response rate was acceptable at 48%. Demographic characteristics of the responders suggest representation of the population. High levels of support were found for research activity in principle, but actual levels of research activity and experience were modest. Barriers to research were in common with other professions: lack of time and resources. Multiple regression analysis produced a poor fit (R2 = 27% and 21%) when explaining the variance of research experience as a student and as a professional. However some indications are offered as to variables associated with research activity. Activities that are endorsed as most likely to promote research skills will be discussed.
Conclusion: The study provides a representative survey of attitudes to research and related professional issues from UK osteopaths and provides a basis on which other osteopathic populations may be compared.

Contribution, that reached us from Australia:

Osteopathic journals and MEDLINE listing: A new player!

Melainie Cameron (Centre for Aging, Rehabilitation, Exercise and Sport, Victoria University, Melbourne, Australia)
B.F. Walker (James Cook University, Townsville, Australia).
S.D. French (Australian Cochrane Centre, Monash University, Australia)
J. Jannese (Chiropractic and Osteopathic College of Australasia)

Introduction: The MEDLINE database is frequently accessed by clinicians and researchers in the health field. The listing of osteopathic journals with MEDLINE has been troublesome. The Journal of Osteopathy, published out of The American School of Osteopathy in Kirksville, Missouri, from 1894 until 1964, is listed with MEDLINE (1). More recently, a handful of USA osteopathic journals have been added to MEDLINE. Each of these journals relates to USA style osteopathy that is predominantly medical and hospital-based.
History of Chiropractic & Osteopathy: The first edition of the journal of the Chiropractic and Osteopathic College of Australasia (COCA) (2) was known as COMSIG Review (3) and was published in November 1992. Over several years an Editorial Board was formed, comprising osteopaths, chiropractors, medical practitioners and researchers. In March 1996, the name of the journal was changed to Australasian Chiropractic and Osteopathy (ACO) (3), and through this journal osteopaths began to publish more rigorous peer-reviewed scientific articles, including primary research, reviews, case studies, and clinical commentaries. Unfortunately, over the next nine years ACO struggled for manuscripts because the journal was not indexed with PubMed or MEDLINE.
In December 2004, COCA negotiated an agreement with BioMed Central to move the journal to an open access, full text online journal. By achieving publication with BioMed Central, articles published in Chiropractic & Osteopathy will be immediately listed in PubMed, including all back content of ACO.
The aims of this new journal are: to provide osteopathic and chiropractic clinicians with a clinically relevant peer-reviewed journal. The journal will require a higher level of scholarship than previously seen in most other journals within both professions.
What is BioMed Central?: BioMed Central is an independent publishing house that provides immediate open access to peer-reviewed biomedical research (4). All the original research articles in journals published by BioMed Central are immediately and permanently available online without charge or barriers to access. PubMed is the National Library of Medicine service that provides access to MEDLINE. After a period of time the journal will also apply for full listing in MEDLINE.
Conclusion: The publication of Chiropractic & Osteopathy will provide an opportunity for osteopathic clinicians and researchers to have their publications available to a wider healthcare audience. Prospective authors are encouraged to submit their manuscripts by accessing the journal online at BioMed Central (4).

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