



Research Report

This is a brief summary of freely available literature on manipulation for the treatment of low back pain published since June 2004. Articles prior to this have been appraised in the recent article by Tim Woodhead and Angela Clough in the journal of orthopaedic medicine 27, 3 (2005).

Using the Australian national health and medical research council system for grading evidence manipulation was found to be slightly more effective than sham therapy but not more effective than other forms of care in a review by Bogduk (2004).

This appears to be in conflict with some guidelines that recommend manipulation in preference to other conservative treatment measures for low back pain.

Pragmatic trials aim to reflect clinical reality where treatments are often used in combination. UK BEAM is such a trial investigating the effect of adding exercise classes, spinal manipulation and spinal manipulation followed by exercise classes to "best care" in general practice for low back pain. Validated long term outcome measures were used and all groups improved over time.

An additional benefit of combined treatment over manipulation appeared to be greater improvements in beliefs about back pain and fear avoidance. A comparison of delivering manipulation in private and NHS premises was also made and no significant difference found.

The authors point out that due to the large cost of back pain even small differences in clinical outcomes may have large economic effects. Analysis of cost effectiveness for each strategy concluded that spinal manipulation is a cost effective addition to best care for

back pain in general practice and manipulation alone probably gives better value for money than manipulation followed by exercise (UK BEAM trial team 2004).

Soft tissue mobilisation in conjunction with exercise was investigated in a trial by Geisser et al (2005). A number of validated assessment tools were used to measure pain and disability. The study concludes manual therapy with specific exercise gives significant improvements in pain in a sub group of chronic low back pain patients. There was no support that manual therapy alone is beneficial.

No significant improvements in disability were observed demonstrating a reduction in pain does not necessarily lead to change in function. Non completers were more likely to be male, receiving compensation and had higher reported pain and disability levels. Study findings may not therefore be generalisable to this subgroup. The authors recommend further research into the effect of combining manual therapy with exercise.

The effect of technique selection was investigated in a trial by Chiradjant et al (2003). Low back pain patients were randomised to 2 groups. In the therapist selected group the mobilisation technique used to treat the patient was based on examination findings of the treating physiotherapist. A randomly selected manual therapy technique was used to treat patients in the 2nd group. This study only investigated immediate effects from a single treatment.

Primary analysis indicated no difference between therapist selected and randomly selected mobilisation techniques. This is contrary to recommendations in manual therapy texts. Authors suggest these findings may be due to the homogenous sample of patients with non specific low back pain used and recommend further research into the effect of specific treatment techniques with

heterogeneous samples.

In a study by Frost et al (2004) patients with mild to moderate low back pain were randomised to an advice group or a physiotherapy group. This was not specifically a trial of manipulation but is relevant as a large proportion of patients in the therapy group received manual therapy treatments. Validated outcome measures were used at 2, 6 and 12 months.

The authors conclude that routine physio for mild to moderate low back pain is no more effective than a session with a physiotherapist that includes

continued on page 3

Don Fraser



Dr David Knott, Chair of the SOM, presenting Dr Donald Fraser with his Honorary Membership of the Society of Orthopaedic Medicine at the 2005 AGM.

After being introduced to Orthopaedic Medicine by James Cyriax, Don subsequently became a fellow of the Society and has always been a stalwart supporter, promoting the Society and Orthopaedic Medicine throughout North America and Canada. He has been involved as a teacher and examiner for the Society and has always made great efforts to attend the annual Symposium despite the great distances involved. In recognition of his support and service, he was awarded an Honorary Membership of the Society of Orthopaedic Medicine at the 2005 AGM.



SOM Research Fellowship

Many thanks to Debbie Cox for this first research report. Debbie receives the SOM/University of Hull research bursary for promoting evidence based practice for the SOM. Debbie has written a few words about her current position and interests below:

I currently work for City hospitals Sunderland as an extended scope practitioner in accident and emergency. This is a relatively new role developed following a pilot project I was involved in to assess the effect of direct access to physiotherapy in the accident and emergency setting. Prior to this I have had experience working as an extended scope practitioner in spinal pain.

Both of these posts have developed my interest in new ways of working and I enjoy being involved in new projects and developing roles.

Completing the Orthopaedic medicine MSc increased my interest in research and I have since been looking for an opportunity to increase my research activity whilst continuing to build on clinical experience.

I am also regularly involved in injection therapy clinics based in a rheumatology department. I am proposing to use the SOM research opportunity to look at injection therapy as a component of an overall management package for sub acromial impingement. In addition I hope I can provide support to members implementing evidence based practice through regular evidence reviews and updates.

DEBBIE COX

EDITORIAL

I hope reading Debbie's article inspires you and, if so, just a reminder that the SOM has two levels of research grants available, of up to £500 or £5000. Details of how to apply can be found on the website or obtained from Amanda Sherwood. The research does have to be related to Orthopaedic medicine and there will always be a ready medium to publish the results through our main Journal or the edited highlights through the newsletter.

EDITOR, SOMTIMES

Cervical Arterial Dysfunction

A summary of a presentation by Roger Kerry on behalf of the Manipulation Association of Chartered Physiotherapists (MACP) at Coventry 1 December 2005

Roger Kerry presented findings from an exhaustive search of the relevant literature from the last 15 years. This uncovered over 800 articles and a summary of the main findings is presented below:

The term vertebrobasilar artery insufficiency (VBI) is misleading because it does not consider the anterior (carotid) arteries. The anterior arteries are noticeably absent and disregarded within manual therapy texts and this is erroneous. The anterior arteries - the common carotid and internal carotid - supply more blood to the brain than the posterior arteries. A more inclusive term than VBI is Cervical Arterial Dysfunction (CAD).

The oft quoted cardinal signs of VBI/CAD, e.g. the 5 D's of Coman, are not supported by the literature. Unilateral neck and head pain is actually the commonest symptom associated with VBI/CAD.

Various figures are often quoted within the literature to indicate what the ratio of risk is to number of manipulations performed. However, such data is wholly inaccurate and all that can be stated is that there is a risk of CAD associated with cervical spine treatment. The real risk of vascular complication post manipulation is impossible to estimate.

Objective tests designed to screen for blood flow complications in the neck have poor sensitivity and specificity.

Consideration of atherosclerotic risk factors, repeated trauma and possibly upper cervical instability may assist in identifying at risk patients.

Adherence to guidelines is not necessarily a medico-legal defence. Expert opinion can be over-ruled by law.

So where does that leave us?

It is suggested we need to embrace a new way of thinking. We should move away from asking: Does this patient have VBI and can I safely continue with manipulation? And instead ask: What is the risk that this patient will have a catastrophic event as a result of treatment? The latter question demonstrates a more extensive consideration of the blood supply to the brain and considers the potential for complications to develop as a result of treatment.

Assessment should now focus on identifying the subjective risk factors such as hypertension, diabetes and hypercholesterolemia. Objective testing should include measuring resting BP, calculating BMI and upper cervical instability testing. A thorough subjective history must be taken. Finally, traditional positional tests for VBI/CAD and a neurological examination should be performed. The MACP has developed an assessment framework which should be viewed as demonstrating the analytical risk assessment process based on our current knowledge and not as a rigid guideline.

What next?

The assessment framework and literature review is available via the MACP website at www.macpweb.org. This is an active document and feedback is invited. The SOM will be formulating a response to this exciting piece of work later this year. If you would like to be involved then please send any comments you have either directly to the MACP or, if you would like to influence the SOM response, send your comments directly to me. I look forward to hearing from you.

GORDON SMITH (GORDONDSMITH@BTINTERNET.COM)

PGDIP/MSc Orthopaedic Medicine

Just to keep you informed, the initial validation period of the MSc Orthopaedic Medicine has expired and the Joint programme is now closed to new applicants. Elaine Atkins, the SOM MSc programme leader, is currently exploring the development of a new post-graduate programme in orthopaedic medicine with Middlesex University which, provided that the SOM review and validation are successful, will aim to start in January 2007. Elaine will be pleased to hear from you if you are interested in the new programme.

Research Report *continued from page 1*

advice and suggest these findings challenge the traditional model of physiotherapy. However patient perception of benefit was in conflict with validated outcome measures and the clinical significance of this is recommended for further investigation.

The review articles by Sran (2004) and Nadler (2004) identify reasons why studies of manipulation have mixed outcomes. Variations in treatment techniques, protocols, dosage and use of combination therapies (Sran 2004), poor study design, execution and poorly quantifiable objective measures (Nadler 2004).

Positive results for manipulation were reported in those studies where a clear protocol based on clinical guidelines or expert texts for the manipulative treatment provided was described (Sran 2004). The SOM lumbar manipulative procedure is such a protocol.

A review by Licciarlone (2004) summarises the results of 3 USA trials of osteopathic manipulation concluding it to be beneficial in many low back pain patients. The findings of this review are not necessarily applicable to the UK back pain population as the article is an appraisal of the role of osteopathic physician which does not widely exist in the UK healthcare system.

The review conducted by Nadler (2004) found significant results for manipulation easier to demonstrate in the early stages of a painful episode. There is a study in progress described by Hancock et al (2005) due to report in 2007. The aim of this study is to evaluate NSAIDs and/or manipulation as first line therapy using validated outcome measures. This study may provide evidence whether manipulation is more beneficial when introduced as part of first line management or would be better reserved for those cases not responding to GP care.

The findings of Geisser et.al (2005) and Chiradjant et.al (2003) reflect a need for current research to work towards development of assessment tools that identify subgroups of low back pain patients that will respond favourably to specific treatments. Ultimately evidence based protocols and guidelines for the management of low back pain could be produced by such work.

Trials published more recently appear to be in agreement with the findings of the review by Tim Woodhead and Angela Clough (2005) that spinal manipulative therapy is an effective treatment for low back pain and with the recommendations of the Cochrane review that it is not more effective than other advocated therapies.

References

A further reference list of relevant papers that will require payment to access is included in the full version of this report.

Bogduk, N. Management of chronic low back pain. Medical journal of Australia 2004 Jan 19;180(2):79-83 Review
Chiradjant, Maher, Latimer, Stepkovitch. Efficacy of "therapist-selected" versus "randomly selected" mobilisation techniques for the treatment of low back pain: A randomised controlled trial. Australian journal of physiotherapy 2003 49:233-24
<http://apa.advsol.com.au/physio%5Fand%5Fhealth/home.cfm?CFID=722887&CFTOKEN=18110621>

Frost, Lamb, Doll, Carver, Stewart- Brown. Randomised controlled trial of physiotherapy compared with advice for low back pain. BMJ 2004; 329:708 (25 sept) <http://bmj.bmjournals.com/cgi/content/full/329/7468/708>
Geisser, Wiggert, Haig, O'Colwell. A randomised controlled trial of manual therapy and specific adjuvet exercise for chronic low back pain. Clinical journal of pain 2005; 21 (6): 463-470 PMID16215330

Hancock, Maher, Latimer, McLachlan, Cooper, Day, McAuley. Manipulative therapy and/or NSAIDs for acute LBP: design of a RCT. Biomedcentral musculoskeletal disorders 2005 Nov 10;6:57 <http://www.biomedcentral.com/1471-2474/6/57> PMID16280089

Licciarlone, J.C. The unique role of osteopathic physicians in treating patients with low back pain. Journal of American osteopathic association 2004 Nov 104 (11 suppl 8):s13-8. PMID15602036

Nadler, S.F. Non pharmacologic management of pain. Journal of American osteopath association 2004 Nov; 104 (11 suppl 8): 5 6-12 Review PMID:15602035

Sran, M.M. To treat or not to treat: new evidence for the effectiveness of manual therapy. British journal of sports medicine. 2004 oct; 38 (5):521-5. Review. PMID15388530
UK BEAM trial team. United Kingdom back pain exercise and manipulation randomised trial: effectiveness of physical treatments for back pain in primary care. BMJ 2004 Dec 11; 329 (7479):1377. Epub 2004 Nov19. PMID15556955
UK BEAM randomised trial: cost effectiveness of physical treatments for back pain in primary care. BMJ 2004 Dec 11; 329 (7479): 1381 PMID 15556954

Useful databases

PubMed <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>

PubMed Clinical Queries <http://www.ncbi.nlm.nih.gov/entrez/query/static/clinical.html>

SUMSearch <http://sumsearch.uthsca.edu/searchform45.htm>

Cochrane library and collaboration <http://www.cochrane.org>

CINAHL <http://www.urmc.rochester.edu/miner.educ.ebnfilt.htm>

Evidence based medicine <http://www.evidence-basedmedicine.com>

PEDro <http://www.cchs.usyd.edu.au/pedro>

BestBETS <http://www.bestbets.org>

Bandolier <http://www.jr2.ox.ac.uk/bandolier/whatnew.html>

TRIP Database <http://www.tripdatabase.com>

LIST OF EVENTS

BASEM (Scotland) - Building the ultimate back: from rehabilitation to high performance

KILMARNOCK, SCOTLAND

20-21 May 2006

Email: y.gilbert@resed.ac.uk

BASEM - Treatment approaches in sports medicine

26 -27 June 2006

1st Joint Meeting of the Bone Research Society and the British Orthopaedic Research Society

SOUTHAMPTON, UK

5-6 July 2006

Tel 01453 549929; Fax 01453 548919

Contact online

Results from Questionnaire

that was sent to all SOM members regarding multi-disciplinary courses.

WOW-what a response! Thank you all so much for taking time to complete and return this questionnaire. We had 170 returned and your opinions were wide and varied! We asked you to do this to help Council decide which step to take. The results show that your votes are about 50-50. My job now is to feed this back to Council at the next meeting at the end of March and Council will decide where to go from there. We will of course keep you informed but in the mean time if you have any further comments/opinions please let me know-goodlads2@yahoo.co.uk

Thank you once again and we will keep you posted

EMILY GOODLAD

SOM WEB SITE

Please note that the SOM has a new web site address: www.somed.org

We hope this will be much easier for us all to remember!

Jill Gillespie (Reading) drew the fine SOM Hand in the last issue.

The full size original was presented to Elaine Atkins after the Reading Module C and the treasure should be shared with you all



BASEM Congress 2006

OXFORD, UK

5-7 October 2006

OCPPP Annual Conference - Kneed to Know

NOTTINGHAM UNIVERSITY

20-22 April 2007

Contact online

Posture - What a pain!

SOM/BIMM SYMPOSIUM 2006

LONDON, UK

2 December 2006

www.somed.org

OCPPP Annual Conference & Education Day

NOTTINGHAM, UK

20-22 April 2007

BOOK REVIEWS

Clinical Guide to Sports Injuries

Prof Roald Bahr & Sverre Maehulm
451 PAGES, £65

Publisher - Human Kinetics
ISBN 0-7360-4117-6

The general theme of the book is the diagnosis, treatment & management of sports injuries. It is a very well presented text. The layout is clear and well organized. The first three chapters cover; Types & causes of injuries, Treating sports injuries and Preventing sports injuries respectively. The remaining chapters are divided into regions of the body for ease of reference. It is superbly illustrated with more than 400 illustrations in full colour & 120 photographs

The target market would be physiotherapists & general practitioners with a musculoskeletal specialism & sport rehabilitators.

The strength of the text is the clarity in which it covers a wide range of sporting injuries from diagnosis to management. An excellent CD-ROM, supplements it.

The weakness is the absence of supporting references for each section. It is still a very thorough text & would be a useful reference book to practicing clinicians, educators & students.

ANGELA CLOUGH, FELLOW, SOCIETY OF ORTHOPAEDIC MEDICINE

Structural Bodywork

John Smith
1st Edition 221 PAGES, \$48.95

Elsevier Churchill Livingstone
ISBN 0-443-10010-1

Structural bodywork is a well laid out, user friendly text which is predominantly easy to read and understand. Early chapters give a thorough grounding of simple anatomy and function with particularly good ones on connective tissue structure and excellent descriptions of postural types. Disappointingly, though references are plentiful, they mainly from standard texts rather than of a scientific nature which leaves an 'evidence base' vacuum round the topic.

The techniques covered in the last third of the book will be familiar to any manual therapist and encompasses a range of techniques including variations on trigger point therapy, hold-relax and contract relax, auto assisted and passive stretches, deep tissue massage, normal movement and dynamic re-education of posture and gait. Each technique is accompanied by brief instruction for patient and therapist, as well as photographs, but these are unlikely to be sufficient for novice practitioners to perform the treatments effectively.

Overall I feel that this is a useful reference text for simple anatomy and postural types for any manual therapist. It will also be valuable to the more experienced Structural Bodywork practitioner who requires a reference text for specific techniques. However, those of us who are less familiar with the whole topic are unlikely to become competent practitioners of the art with this text alone.

SALLY DURNFORD, FELLOW, SOCIETY OF ORTHOPAEDIC MEDICINE

WELCOME TO OUR NEW COUNCIL MEMBERS

Dr Duncan Reid, Dr Nicholas Shaw and Mrs Fiona Ottewell who were voted in at the AGM on December 3rd 2005



THE SOCIETY OF ORTHOPAEDIC MEDICINE

COUNCIL MEMBERS AND STAFF

Ms Anne-Marie Ainscough-Potts (*Treasurer*)
Mrs Angela Clough (*Research Committee Chair*)
Mr Jonathan Flynn
Mrs Karen Flynn
Ms Emily Goodlad
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Dr Christopher Monella
Mrs Fiona Ottewell (*Secretary*)
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Society of Orthopaedic Medicine
British Institute of Musculoskeletal Medicine



**Posture
IT'S A PAIN!**



2 DECEMBER 2006
HILTON METROPOLE HOTEL, LONDON

KEYNOTE SPEAKER:

PROFESSOR STUART MCGILL (Waterloo, Canada)

We have arranged an impressive list of authoritative speakers who will present their findings and opinions from an evidence-based practical, investigative and surgical perspective. The symposium aims to widen our knowledge for the effective prevention and management of pain that may be associated with posture and we shall welcome your questions to stimulate discussion. Email: admin@somed.org or info@bimm.org.uk
Further details from:

www.somed.org or www.bimm.org.uk