

Feature Commentary**12TH INTERNATIONAL CONFERENCE IN MECHANICAL DIAGNOSIS AND THERAPY: A RECAP**

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CONFERENCE CHAIR

As Conference Chair for the 12th International Conference in Mechanical Diagnosis and Therapy, “Onwards and Upwards: Pushing the Boundaries of Musculoskeletal Care” in Austin, Texas, I wanted to take a few moments to share a few thoughts.

As I indicated in my ‘Welcome’ remarks, it could not have been a more fitting place for this international congress to have been held than Austin, Texas. The environment of the city, the venue and the speakers all made for a first class clinical and scientific meeting. 560 participants attended representing 31 different countries making it the largest MDT Conference ever.

One of the things that make these McKenzie International meetings so remarkably special is the caliber of speakers they attract. In addition to those well known to the McKenzie world, this meeting attracts some of the best-known researchers and clinicians in the international community. This year was no exception. The one common thing these luminaries find is how respectful, open, and thoughtful the conference participants are. It was designed to permit both open interaction with speakers during the sessions, and more casual contact with them through social events.

Let me share with you some things I learned from the Keynote speakers at this year’s conference.

Jeremy Lewis, PhD from St. George’s University of London was one of my most pleasant surprises. Aside from Dr. Lewis, Robin McKenzie in particular and MDT faculty presenters, I have never experienced a presenter to ask for an unplanned conference participant with a musculoskeletal problem to come to the stage. Dr. Lewis successfully treated an unknown attendee with a shoulder problem. I learned that clinical research in the shoulder is almost as murky as spine literature. It was clear, however, that an observant and thoughtful clinician could reduce symptoms in patients in a systematic way. His objective in the conference was to encourage clinicians to focus more on evidence based pathways to help “...fill in the spaces...” where the researchers leave off.

Susan Mercer, PhD of the Royal Newcastle Center of New South Wales once again dazzled us with her ease in discussing the complexities of anatomical sources for spinal and extremity pain (knee and upper extremity). Her ability to describe clinical anatomy in the clearest of terms, made most of us listening feel we had a much better understanding of an anatomical rationale for musculoskeletal pain.

Nadine Foster, PhD from the U.K. brought us a first hand look at stArtBack program at Keele University. While MDT subgroups patients according to their mechanical diagnosis, the stArtBack program subgroups patients according to their risk: low, medium, and high, on the basis of a nine item-screening tool. Items ask about symptoms, function, sense of well-being and bothersomeness. The ‘risk categories’ suggest potential success or failure for patients entering rehabilitation. In addition, risk categories suggest the extent of treatment that might be necessary for respondents. Her objective was to heighten consideration amongst clinicians to systematically identify patients with different levels of ‘success risk.’

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Tom Petersen, PhD from the Back Center of Copenhagen, Denmark also spoke about the importance of subgrouping patients with low back pain. He expressed the importance of creating classification systems that help to inform treatment of low back pain. This, of course, is precisely what MDT is about. He presented some original MDT research, and wanted participants to appreciate there were domains, other than mechanical, to consider when managing patients with low back pain.

Wim Dankaerts, PhD of the Department of Rehabilitation Sciences at the University of Leuven, Belgium was an entertaining, thoughtful and provocative speaker. He spoke about the relationship between sitting posture and trunk muscle activation. He made the case that sitting and movement postures are individual and must be evaluated on the basis of maladaptive motor control. He suggested observation of inappropriate motor control has a direct impact upon symptoms of pain and reduced function. His goal was to encourage conference participants to "...think outside the box. Thinking outside the box leads to the next step...*doing* outside the box!"

Maurits van Tulder, PhD of the Institute for Health and Care Research of VU University in Amsterdam, brought to us an update and state of the literature regarding back and neck pain from the Cochrane Collaboration. There is a tendency for clinicians to read the systematic reviews to find rationale for the particular way they practice therapy. Dr. van Tulder helped us to appreciate that in addition to physical exercise, there are behavioral interventions that can be helpful. He indicated, however, that these interventions may not yet be ready for "...prime time..." from an evidence based medicine point of view, and more work needs to be done. His hope for participants to the conference was that clinicians would "...collect and monitor clinical outcomes for their practices..."

John Childs, PT, PhD of the U.S. Army-Baylor University in San Antonio was our only Keynote speaker from the United States. As we heard from some of the other presenters, and is the foundation of MDT, Dr. Childs spoke about the importance of subgrouping patients. He spoke about the importance of Clinical Prediction Rules in providing clarity in patient treatment. In addition, he provided the conference with a good background and case for the use of stabilization exercise. We discovered from him, stabilization is not a consistent practice across the field of musculoskeletal rehabilitation.

In addition to the keynote speakers, intriguing material was presented by MDT diplomats Richard Rosedale, Stephen May, Dave Oliver, Anja Franz, Mark Miller, Gary Jacob, Robert Medcalf and Mark Werneke. New research pertaining to MDT was presented and analyzed, topics such as Motivational Interviewing and utilizing MDT to deliver effective health care in industrial settings were introduced, and live patient examination was an integral part of the Conference as Colin Davies, Scott Herbowy, and Mark Miller joined Jeremy Lewis in assessing spine and shoulder patients on stage.

In summary, my impression is The McKenzie Institute International's program this year was excellent both in depth and breadth. The next international MDT conference announced will be in Copenhagen, Denmark in 2015 and details will be available mid 2013. I was honored to chair this year's program and hope it was as enlightening to you as it was for me.

***Editorial Note of Interest:**

The next McKenzie Institute Americas Region Conference is in Denver, Colorado — 26-28 July 2013.

These conferences offer practical experience with workshops that emphasize clinical reasoning and hands-on skills immediately applicable in the clinic!

Conference Chair, Audrey Long, PT, Dip. MDT, invites you to [learn more](#) about the Denver program !

GUEST COMMENTARY**Mechanical Diagnosis and Therapy in the Older Population***Dave Oliver, PT, Dip MDT*

Throughout my McKenzie training from Part A to Credentialing to the Diploma Program and eventually becoming teaching faculty with The McKenzie Institute, a common question I've heard is "MDT works well for most of my patients, but how do you manage your older patients?"

The answer hasn't changed over the years, "The same way as I manage the younger patients!" Sure, older patients can have other issues, co-morbidities, degenerative changes, bilateral 'rotor cup' issues, the list goes on... but a patient is a patient regardless of age. If you take a detailed history, perform a thorough physical examination and look for classification, direction and force, though recovery may be slower, you will likely have as much success in this population as you have in your younger patients.

Since becoming teaching faculty, the questions about managing the older populations continue, often accompanied with, "How do you treat stenosis?" "What about degenerative changes?" Again, my answer is, take a detailed history, perform a thorough physical examination and try to classify them, determine direction and establish the correct force.

During my teaching, I'll often quote the numerous studies citing that imaging findings often have little to do with the patients' complaint. However, the majority of what I was telling my students regarding this population was anecdotal evidence of what I see in the clinic. With these clinical experiences and discussion with fellow faculty, we decided to recruit MDT colleagues to collect data on the older population with the plan to present the findings at the McKenzie International Conference in Rio de Janeiro in 2005. The original study, presented in Rio and published in 2010 in the International Journal of MDT, consisted of 150 data sets of patients over the age of 65.


The primary reason for the study was to investigate the prevalence of centralization and directional preference in the older population. It has been well documented that centralization is an important clinical finding, though its incidence diminishes with age (Werneke 2008). As clinicians, we observe this reduced incidence of centralization; however, many patients appear to continue to demonstrate directional preference and can be managed appropriately.

The results of this initial data collection were consistent with previous research that centralization indeed did not occur as frequently, with only 21% of patients demonstrating this phenomenon. However, the majority of patients did continue to demonstrate directional preference (87%) and were therefore classifiable within the MDT system. Not surprisingly, no postural syndromes were present in those over 65. More interestingly, no patients with the dysfunction classification were identified. This was not a surprise as this is what I see in the clinic. This finding, though, may stimulate the less experienced clinician to challenge their patient's clinical presentations and therefore encourage them to search and destroy derangements!

All patients classified in this study were derangements, with the majority having a directional preference for extension and to a much lesser degree flexion and lateral directions.

In our data collection, we also collected data on spinal imaging and tried to identify a relationship between the imaging and classification. Also, consistent with previous research, imaging appeared to have little measurable value in the management of this population of patients, but the image findings may negatively bias the clinician in their assessment and management.

For example, we identified 47 patients that had imaging confirm spinal stenosis. Physical therapists being presented with these patients may be tempted to manage the patient with a flexion based exercise program and may avoid testing extension for fear of worsening the patient. However, of these 47 patients, 38 (80%) were classified as derangements, and 33 (70%) of those classified derangements were extension responders. Interestingly, in my personal clinical practice and in discussion with colleagues, it's not uncommon to see those older patients who are extension responders not worsen with flexion based exercise, potentially misleading the clinician even more!



The patient with “clinical” spinal stenosis has such a consistent history and mechanical presentation that a thorough mechanical examination, including testing into extension, is essential to challenge this presentation and confirm or reject the diagnosis of spinal stenosis. This poor relationship between spinal stenosis imaging and classification was consistent with other imaging findings in this study. Imaging findings such as spondylolisthesis, degenerative changes and bulging/herniated discs had little bearing on classification or direction.

A follow up study was presented at the 12th McKenzie International Conference in Austin, Texas in October. In this study, 138 data sets were collected and the results were similar with low rates of centralization, high rates of directional preference and poor correlation between imaging and classification. In this most recent study, we also collected outcome data which confirmed that those patients who are classifiable, whether through centralization or directional preference, had significantly better outcomes than those who were not classifiable.

So the next time I’m asked how I manage the older patient, my answer to that question, like a dysfunction, remains unchanged! I take a history, perform a physical examination and I try to classify them, determine direction and establish the correct force.

Don’t be afraid to extend! Or flex! Or move!

Institut for Mekanisk Diagnostik og Terapi McKenzie Institut Danmark



BRANCH SPOTLIGHT

McKenzie Institute Denmark
Eva Hauge, PT, Dip. MDT, MSA

1. How long has the branch been officially established, and where is the branch office based?

The Danish branch was officially established in 1994, by Uffe Lindstrom, Merethe Fehrend, Asbjorn Mittun, Lene Skytte, and Ole Meyer. As most of you probably know, Uffe Lindstrom is now the Chairman of the MII Board of Trustees. We do not have an official office, but operate from private addresses in Holstebro, Jutland, Odense, and Funen where the secretary, chairman, and course coordinator are situated.

2. What is your current branch structure? (i.e., number of admin staff, board directors, faculty)

The Danish branch is administered by a board consisting of a chairman and treasurer (Eva Hauge), a secretary (Heidi Eirikstof), four board members (Claus Kjaergaard, Charlotte Krog, Anne Mette Anthonson and Dorte H. Knudsen) and two alternates (Steen Jepsen and Mads Vesterlund). A board member is elected at an annual meeting for a two year term with the ability to be re-elected. We also have a course coordinator (currently Eva Hauge), a webmaster (Dorte H. Knudsen) and an editor for the Danish newsletter (Brian Sorensen). We have seven Faculty members (Lene Skytte, Ole Meyer, Heidi Eirikstof, Charlotte Krog, Simon Simonsen, Steen Olsen and Martin Melbye)

3. How many Credentialed and Diplomaed clinicians do you have?

Currently, we have 630 Credentialed therapists and 24 Diplomaed therapists in Denmark; however, not all Credentialed therapists have maintained their membership in the Danish branch.

4. Do you have memberships? If so, how many members?

We have an annual membership with 966 current members. We have a large group of loyal members with memberships spanning many years; however, our membership fluctuates as not everyone maintains their membership in the Danish Branch. This is primarily for two reasons. Firstly, the Danish branch is a member of the Danish Physiotherapy Association and therefore membership of the Danish McKenzie branch requires membership of the Physiotherapy Association. Second, some therapists are only members temporarily while they participate in our courses to obtain certain benefits. Additionally, we also have therapists that attend our course without a membership, but at a higher fee.

5. How many courses do you hold every year, and in how many venues?

In 2012, we held 20 courses (A-D), four Credentialing examinations and five workshops. For 2013, we have planned 19 courses (A-D), four Credentialing exams and three workshops so far. We have had a slight decrease in participation in courses during the last year which is probably due to the general economic crises, but we have approximately 500 participants at courses and exams every year (some attend several courses).

In 2012, we held six afternoon meetings each in a different location with a total of 170 participants. The topic was MDT and lumbar nerve root pain. We chose this topic because there was a current Danish guideline discussing the importance of non-operative care.

We currently have two venues for our courses and occasionally we hold a course in a more local area.

6. What has been some of the branch's greatest attributes?

In 1999, MDT was emphasized in the Danish Guidelines on Back Pain as a valid assessment tool and thus, we gained a great attention towards MDT and our courses. We have been able to maintain a great interest for our courses primarily for physiotherapist working in primary private care, but also physiotherapists at hospitals and in municipal care have found interest in MDT as a tool for assessment and treatment.

During the last year, an extended assessment tool has been developed and accepted as a tool for a special assessment of patients with back pain in some regions of Denmark. In this extended assessment, which is very much built on Tom Petersen's classification system, MDT is a key point, which has kept the interest and needs for education in MDT at a certain level. Participating in Part C has been a minimum requirement.

I personally find it a great attribute that we are able to maintain over 960 members which makes us the second largest group among the 17 subgroups of the Danish Physiotherapy Association. We are only surpassed by the Sports Physiotherapy Group. Regarding the number of courses, we are amongst the groups that have most participants.

7. What are the greatest challenges for your branch?

There are several challenges ahead. Challenges are important and should provide us with enthusiasm in order to develop new ideas all the time to face and solve them.

One of the greatest challenges for the Danish Institute is to provide interesting workshops and update days for our growing group of Credentialed members. In order to challenge their clinical reasoning skills within MDT, we should continuously provide different activities. The fact is that many physiotherapists go through the courses A-D and obtain their credentialing exam very quickly, and then they are on to other things. If we want the growing group to be sharp with MDT reasoning, we have an obligation to continuously provide them with challenges, especially since it is unlikely that everybody will go through the Diploma programme. It is very important for the quality of assessment and treatment.

We do have a certain amount of evidence to build on in MDT, but the scientific community will continue to require more which is an exciting challenge for MDT in general. In particular, it will be important to obtain much more recognition about the MDT assessment as a useful tool in the extremities. It is yet far from recognized as a useful tool compared to the spine.

In Denmark, we also have a great challenge in the sense that we have a very large faculty group and new Diplomaed therapists who want to apply for probationary are turned down, as we do not seem to have room for more faculty at the moment. It is a great challenge for the board as well as the faculty group and a shame for the skilled people who are turned down.

In the political arena, we have a challenge as well. Our cooperation with the other subgroups and the Danish Physiotherapy Association is fairly good, but somehow we are always looked at as inferior to the manual therapy group (despite our having such a large membership). In a new structure in the Danish Physiotherapy Association, a new Society for professional areas of interest consisting of subgroups and interest groups (i.e. pain, manual therapy, MDT, Sports, neurology etc) will be established. The source of the restructuring and the establishment of the subgroups is WCPT. Since the McKenzie Institute International is not a subgroup within WCPT, we will have a hard time positioning MDT in Denmark compared to other groups. This will be of great importance for the coming years. Politics are an important and powerful matter in recognition too – not only evidence.

The last challenge I will mention is of great interest to us. We have been approached by the University of Southern Denmark with a possibility of providing a module on MDT for a new Master of Science in Physiotherapy. We are currently working on different ideas and find it very important to be part of a university programme.

8. **Any other comments?**

In Denmark, we are very thrilled with the fact that we are going to host the next international conference in MDT in 2015. We hope we can attract even more people than at the last conference in Austin, which was a great success.

We shall look forward to welcoming all of you to Copenhagen in 2015 to enjoy the conference, our beautiful architecture and sights such as Tivoli, The Little Mermaid and The Canals!

CASE REVIEW: A CLINICIAN'S PERSPECTIVE**Don't Ever Discount the Value of MDT Evaluation with the Elderly**

Chris Chase, PT, Dip. MDT, FAAOMPT

At the McKenzie International Conference in Austin this year, Dave Oliver PT, Dip. MDT presented findings from a multi-centered observational study looking at the prevalence of centralization and directional preference in the elderly who suffer from low back pain. This is a review of one of the participating patients who was included in the study. She was treated in our clinic, had an excellent outcome and represents some of the primary findings Dave shared with everyone at the conference. Attached is the assessment form from her initial evaluation.


The patient was a 75 year old female who suffered for six months from back and bilateral posterior thigh pain. The pain was unchanging, never extended below her knees, and was intermittent. Her pain was worse with walking, standing for meal preparation and taking care of her toddler grandson. Her pain was worse with activities, but at times she would get relief with positional changes. Sitting was not painful, her sleep was not disturbed, and she had no difficulty with bending. There were no specific movements that alleviated her symptoms other than sitting or lying. She recently had an MRI from her internist who said the findings included stenosis and degeneration. There were no reported red flags.

Based on the history, stenosis sounded plausible as her pains were worse with extension based weight-bearing movements and she had relief with sitting and lying. However, her primary complaint was pain without symptoms below her knees. She had no complaints of paresthesia and did not complain of gait disturbances. While she did present with a slightly increased kyphotic thoracic spine, she did not display a flexed posture in standing or walking from the lobby to treatment room as often seen with clinically relevant stenosis.

After taking an approximately 15 minute history, I first analyzed the effects of posture correction. She was experiencing mild central lumbar pain. Having her increase and maintain her lumbar lordosis had no effect on her symptoms. Her standing posture was next analyzed, and she demonstrated normal lumbar spine position with no evidence of any deformity. Her increased thoracic kyphosis, which she expressed had been worsening slowly over the years, did not influence her lumbar and thigh complaints. Looking at her movement loss, she moved quite well except for a moderate loss of lumbar extension which increased her central lumbar pain only. Her neurological exam was normal.

Based on the finding, it made sense to assess flexion in standing first for her repeated movement exam. Her baseline symptoms at this point were moderate central lumbar pain, and there were no thigh symptoms present. Repeated flexion in standing had no effect on her pain. Extension in standing was next assessed. This movement increased her back pain and produced her thigh complaints although the pain did not remain worse. Repeated flexion in lying had no effect on her pain. At this point, there was no firm confirmation of classification. To further test for clinically relevant stenosis, the patient was placed in sustained extension in lying for five minutes. Remarkably, the pain in her back decreased and no symptoms were produced in her thighs. Although this test is not 100% reliable in producing symptoms in stenotic patients since some patients are only symptomatic in weight-bearing, I was surprised to see her pain level decrease. That might imply a directional preference for extension. She was next instructed in repeated extension in lying and she had an ongoing decrease of symptoms with her pain abolishing during her third set. Upon returning to standing, her pain remained better and she gained a significant amount of extension movement in standing. She was instructed in extension in lying exercises and given postural advice consistent with the treatment of the derangement model.

At her second visit 48 hours later, she was significantly improved and noticed that she could stand longer, the quality of the pain was less, and picking up her grandson was getting easier. After six more visits, in which treatment included the use of clinician overpressure to obtain end-range extension, education on lifting with lordosis, using extension for prophylaxis and eventually recovery of function, the patient reported a 100% recovery and was pain-free. Her movement loss testing was now pain-free and full function in all directions. She understood self-treatment strategies, the importance of posture, and reported high satisfaction with her care.



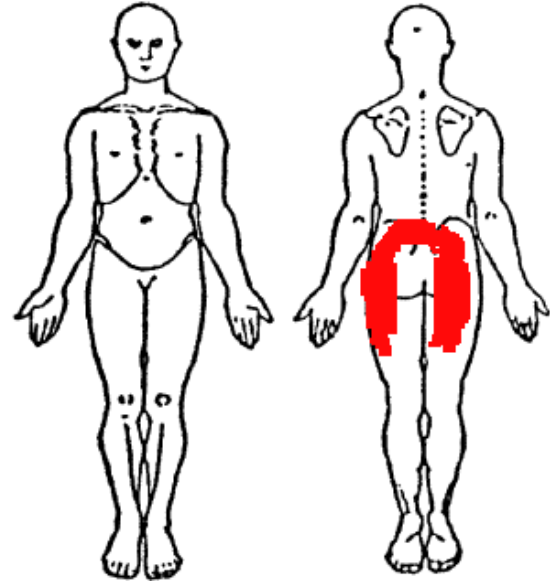
This case review illustrates a patient population frequently seen in the clinic. An elderly client whose imaging study confirms stenosis, reports that pain is worse with weight-bearing activities, and may not describe vulnerability with sitting or flexion activities. Based on this history, it might seem prudent to give flexion based exercises or maybe focus on strengthening of the trunk muscles. However, with a thorough MDT assessment, an underlying derangement was exposed and reduced fairly easily and quickly. While the patient never centralized, as the pain abolished without changing locations, she did have a definite directional preference into extension. She also did not mention worsening with sitting as you might expect, but caring for a grandchild and standing for activities, such as cooking, were aggravating.

Walking and standing tend to be more symptomatic in the elderly than bending and sitting; therefore the novice therapist may assume the patient is stenotic without a full MDT assessment. If this patient would have been sent home with a flexion-based program, most likely no change in symptoms would be elicited. Sometimes in the elderly, derangements do not respond the same way as with younger clients. As Dave presented, the prevalence of centralization goes down and directional vulnerability may not be as obvious or observed. Giving every patient a complete MDT evaluation and not making assumptions based on diagnostic imaging will help you provide high quality care and deliver outcomes that make your patients satisfied.



THE MCKENZIE INSTITUTE LUMBAR SPINE ASSESSMENT

Date 02/02/2012
 Name J. A. Sex M / F
 Address _____
 Telephone _____
 Date of Birth 22/03/1937 Age _____
 Referral GP / Orth / Self / Other _____
 Patient accepts anonymous use of data for research Yes / No
 Work: Mechanical Stresses Retired , Watches 2 year old grandchild 2-3 days a week for 5 hours
 Leisure: Mechanical Stresses Cards, knitting, walking
 Functional Disability from present episode Walking, cooking, lifting grandchild
 Functional Disability score _____
 VAS Score (0-10) 6-7/10



HISTORY

Present Symptoms Back and bilateral thigh pain
 Present since 6 months Improving / Unchanging / Worsening
 Commenced as a result of _____ Or no apparent reason
 Symptoms at onset back / thigh / leg _____
 Constant symptoms back / thigh / leg _____ Intermittent symptoms back / thigh / leg
 Worse bending _____ sitting / rising _____ standing walking _____ lying _____
 am / as the day progresses / pm when still / on the move
 other _____
 Better bending _____ sitting _____ standing _____ walking _____ lying _____
 am / as the day progresses / pm when still / on the move
 other _____
 Disturbed Sleep Yes / No _____ Sleeping postures prone / sup side / R / L Surface firm / soft / sag
 Previous Episodes 0 / 1-5 / 6-10 / 11+ Year of first episode 1990
 Previous history: 2-3 minor episodes, none in last 10 years
 Previous treatments Rest and Medication

SPECIFIC QUESTIONS

Cough / Sneeze / Strain +ve / -ve Bladder normal / abnormal Gait normal / abnormal _____
 Medications Nil / NSAIDS / Analg / Steroids / Anticoag / Other _____
 General Health Good / Fair / Poor HTN, Diabetes II, both controlled with medication
 Imaging Yes / No Stenosis
 Recent or major surgery Yes / No _____ Night Pain Yes / No _____
 Accidents Yes / No _____ Unexplained weight loss Yes / No _____
 Other _____

EXAMINATION

POSTURE

Sitting Good / Fair / Poor Standing Good / Fair / Poor Lordosis Red / Acc / Normal Lateral Shift Right / Left / Nil
 Correction of Posture Better / Worse / No effect _____ Relevant Yes / No
 Other Observations Increased thoracic kyphosis

NEUROLOGICAL

Motor Deficit Normal Reflexes Normal
 Sensory Deficit Normal Dural Signs neg

MOVEMENT LOSS	Maj	Mod	Min	Nil	Pain
Flexion				X	
Extionsion		X			Increase Central
Side Gliding R				X	
Side Gliding L				X	

TEST MOVEMENTS

Describe effect on present pain - During: produces, abolishes, increases, decreases, no effect, centralising, peripheralising. After: better, worse, no better, no worse, no effect, centralised, peripheralised

	Symptoms during testing	Symptoms after testing	Mechanical Response		
			^ ROM	v ROM	no effect
Pretest symptoms standing: 4/10 central back					
FIS	NE				
Rep FIS	NE				X
EIS	Increase back				
Rep EIS	Produce bilat thigh (R>L), Increase back 5/10	NW			X
Pretest symptoms lying: 2/10 Central back					
FIL	NE				
Rep FIL	NE				X
EIL	Increase back				
Rep EIL	3 sets of 8, Abolish	Better	X		
If required pretest symptoms:					
SGIS - R					
Rep SGIS -R					
SGIS - L					
Rep SGIS -L					

STATIC TESTS

Sitting slouched _____ Sitting erect _____
 Standing slouched _____ Standing erect _____
 Lying prone in extension 5 min/ Decreases/ sym back/ VAS 1/ Better Long sitting _____

OTHER TESTS

PROVISIONAL CLASSIFICATION

Derangement _____ Dysfunction _____ Posture _____ Other _____

Derangement: Pain location central/symmetrical above knee

PRINCIPLE OF MANAGEMENT

Education Posture correction Equipment Provided Lumbar Roll

Mechanical Therapy Yes / No _____

Extension Principle REIL X 10 Every 2 hours Lateral Principle _____

Flexion Principle _____ Other _____

Treatment Goals Abolish pain with walking and meal preparation. Return to full childcare activities.

LITERATURE REVIEWS

Summary and Perspective of Recent Literature

Stephen May, PhD, MA, FCSP, Dip. MDT, MSc (UK)

Holmgren T, Hallgren HB, Oberg B, Adolfsson L, Johansson K. Effect of specific exercise strategy on need for surgery in patients with subacromial impingement syndrome: randomised controlled study. *Br Med J* 2012;344:e787

Background

Shoulder pain is common in the general population, and subacromial impingement syndrome is probably the most common source of shoulder pain. In fact, it is now thought that 'impingement' is a misnomer, and factors intrinsic to the tendon are more important in the pathology than extrinsic factors related to the acromial arch. There is some evidence that exercises are an effective conservative line of treatment, but if this fails, some patients are offered surgery; even though several studies have demonstrated equivalent effects between surgery and exercise.

Aims

To compare eccentric strengthening exercises for the rotator cuff and scapular with manual mobilisation with non-specific neck / shoulder exercises in patients who had failed previous conservative care, and were referred for surgery.

Methods

This was a randomised controlled trial, with participant and assessor blinding. 102 patients with persistent (over 6 months) subacromial syndrome who had failed previous conservative care, which might include exercises, were randomised. Patients in both groups received 5-6 individual treatment sessions and were encouraged to perform home exercises once or twice a day. To be diagnosed, patients had to have at least three impingement signs, and a positive response to a subacromial injection of anaesthetic and corticosteroid. The specific exercise group involved eccentric exercises for the rotator cuff, concentric / eccentric exercises for scapular stabilisers, and sometimes passive stretching performed by the therapist. Patients were advised that exercises should be painful, but no worse afterwards, should be continued for two months after treatment, and should be combined with an upright shoulder retracted posture. The control group performed non-specific neck and shoulder exercises with no loading. A sample size calculation with the primary outcome (the Constant-Murley score) and with additional recruits to compensate for drop-outs was used to determine the number of patients. The Constant-Murley score includes range of movement, strength, pain, work load, and daily activity components; runs between 0 and 100, with higher scores indicating better shoulder function.

Results

There were no statistical differences in any outcomes at baseline. The eccentric exercise group had a statistically significant change in all outcomes at 12 weeks. Constant-Murley score changes were 24 versus 9 in the control group; self-report of successful outcome was 69% versus 24% ($p < 0.001$); and self-choice for undergoing surgery was 20% versus 63% for the control group ($p < 0.001$).

Conclusion

A specific exercise group that focused on eccentric strengthening exercises for the rotator cuff is effective in reducing pain and improving function in patients with persistent subacromial impingement syndrome.

Comments

Clearly, surgery should not be contemplated for this group of patients until a programme of loaded eccentric exercises has been tried first. These need to be painful to do, but no worse afterwards, and they need to be continued for several months according to this study. In terms of Mechanical Diagnosis and Therapy, these patients would be classified as contractile dysfunction and a similar loading strategy would be applied as has been used here. This is further evidence for the value of loaded, eccentric exercises for contractile dysfunction.



Fairbank J, Gwilym SE, France JC, Daffner SD, Dettori J, Hersmeyer J, Andersson G. The role of classification of chronic low back pain. Spine 2011;36:S19-S42.

Background

Back pain is a symptom not a diagnosis, and chronic simply means the pain has persisted for at least three months, according to the most commonly used definition. 'Splitting' or subclassifying this heterogeneous pool in some way may help to differentiate responders to different treatments. Classification systems can be broadly divided into three groups: those that are based on clinical descriptors; those that describe prognosis; and those that are based on response to treatment.

Aims

To conduct a review of the literature to describe classification systems for chronic low back pain (CLBP); treatment strategies associated with classification sub-groups, and their reliability; and if classification-specific interventions have been shown to be effective.

Methods

A systematic review of MEDLINE and Cochrane Collaboration Library to access original descriptions of classification systems, their reliability, and clinical trials evaluating their effectiveness. Radiographic and anatomical classification systems were excluded. A level of evidence rating was used to evaluate quality of the articles.

Results

49 articles were finally included, that described 28 classification systems: 16 were diagnostic, 7 were prognostic, and 5 were treatment-based classification systems. The first description of a treatment-based classification system was by McKenzie, and this has been shown to have good reliability amongst therapists trained in its use, but not in novices. Other classification systems also have reasonable reliability, namely the Movement Impairment system, the Canadian Back Institute and the Motor Control Impairment system. There was moderate evidence that classification-specific interventions are effective for the McKenzie and the Canadian Back Institute classification systems.

Conclusion

There are many classification systems for CLBP; the authors do not recommend any single system, but do recommend a system that focuses on directing both surgical and non-surgical treatments. Reliability increased with training in the system.

Comments

As in previous reviews of classification systems, Mechanical Diagnosis and Therapy (MDT) is shown to be well evidence-based in terms of reliability and effectiveness. Interestingly, all the systems that are mentioned in the review have some element of exercise / movement that is based on preferred direction of movement, with the Canadian Back Institute classification system having direct parallels with MDT system. However, other systems do not use the term directional preference, though in effect, that is what they are referring to.

http://journals.lww.com/spinejournal/Abstract/2011/10011/The_Role_of_Classification_of_Chronic_Low_Back.3.aspx



Oliveira VC, Ferreira PH, Maher CG, Pinto RZ, Refshauge KM, Ferreira ML. Effectiveness of self-management of low back pain: systematic review with meta-analysis. Arthritis Care & Res 2012;64:1739-1748.

Background

Self-management for low back pain is commonly advocated in low back pain guidelines, but the effectiveness of self-management and inconsistency of definition make it unclear whether this approach is effective.

Aims

To conduct a systematic review to estimate the effectiveness of self-management for low back pain.

Methods

A number of electronic databases were searched, and 13 articles were retrieved. A meta-analysis was conducted to calculate the pooled effect size of the interventions.

Results

Moderate quality evidence showed that self-management is effective at improving pain and disability for patients with back pain. However, the mean difference short-term for pain was 3.2% and for disability was 2.3%; long-term effects were 4.8% and 2.1% respectively.

Conclusion

There is moderate quality evidence that self-management has small effects on pain and disability in people with low back pain, but the effects are trivial and probably not clinically significant.

Comments

This review questions whether self-management is a worthwhile approach in the management of low back pain. The authors have conducted a robust systematic review and summarised the treatment effect by conducting a meta-analysis to reach a quantitative conclusion on the effect of such interventions. From this analysis, they conclude that self-management is effective, but that its effect size is so limited that its impact on pain and disability is negligible even when compared to minimalist interventions.

However, other aspects of this issue should be considered. Self-management is a complex intervention without a clear standard definition; many of the included studies were simply defined as low back pain school, booklet leaflet and so on, without any clear idea of what this involved. A previous review found that education by itself had only a limited impact on pain and disability in low back pain and osteoarthritis of the knee, but education coupled with an exercise programme had a more substantial effect (May 2010). It is important that both elements are included in any self-management programme, which also should be supported by a clinician, at least for a period.

May S (2010). Self management of chronic low back pain and osteoarthritis. Nature Review Rheumatology doi10:1038/nrrheum.2010.26

<http://onlinelibrary.wiley.com/doi/10.1002/acr.21737/abstract>



Ulus Y, Tander B, Akyol Y, Durmus D, Buyukakincak O, Gul U, Canturk F, Bilgici A, Kuru O. Therapeutic ultrasound versus sham ultrasound for the management of patients with knee osteoarthritis, a randomized double-blind controlled clinical study. Int J Rheum Dis 2012;15;2:197-206.

Background

Osteoarthritis at the knee is common, and before consideration of surgical interventions conservative options are recommended. However, numerous active and passive interventions might be considered; one of which is ultrasound. Despite its ongoing popularity, its effectiveness is unclear.

Aims

The aim of this prospective randomised double-blind placebo-controlled trial was to evaluate the short-term effectiveness of ultrasound on pain, disability, and psychological status in patients with osteoarthritis of the knee.

Methods

42 inpatients with the American College of Rheumatology definition of knee osteoarthritis were included; a sample size calculation was conducted; and outcomes were considered at the end of three weeks treatment. Both groups received interferential and isometric exercises as well.

Results

There were significant improvements in pain stiffness, function, walking time, depression, and anxiety score over time. There were no significant differences between therapeutic and sham ultrasound.

Conclusion

Ultrasound offers no additional benefit to standard physical therapy treatment, based on exercise, for osteoarthritis of the knee.

Comments

This study simply reinforces the numerous systematic reviews that have previously emphatically demonstrated that ultrasound has no therapeutic effect and should not be considered as a treatment option in any circumstance. It is extraordinary, in fact, that it is still taught in undergraduate curriculums, and still considered by therapists at all when the evidence is so categorically negative.

<http://onlinelibrary.wiley.com/doi/10.1111/j.1756-185X.2012.01709.x/abstract>

BUSINESS & MARKETING CORNER

**Infographics:
A Marketing Tool for MDT?**
Yoav Suprun, PT, Dip MDT

Infographics have become another way to share impactful news and ideas, and we found this infographic on back pain getting a lot of circulation across the web, blogs, twitter and email.

Based on this infographic*, please send me your ideas on how we can better promote MDT ... to payers, insurance companies, and consumers.

Let's create a "conversation" on this topic of **active therapy** and PT's becoming "Primary care providers" for musculo-skeletal problems. More specifically, certified McKenzie providers. Maybe we can create our own MDT infographic!

I'll share your ideas in our next newsletter – and if you would like to stay anonymous, let me know.

Please email me directly at yoav@sobespine.com

Many thanks!
Yoav Suprun

*Source: <http://e-rehab.com/2012/09/28/the-new-model-for-low-back-pain-management-see-at-physical-therapist-first-and-fast/>

