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A STUDY OF CLINICAL TRIALS OF THE MOST APPROPRIATE PHYSIOTHERAPY MANAGEMENT IN FROZEN SHOULDER OF SOUTH INDIANS

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ABSTRACT

The current body of evidence does not enable confident direct clinical application of any of the identified CPRs. Further validation studies utilizing appropriate research designs and rigorous methodology are required to determine the performance and generalizability of the derived CPRs to other patient populations, clinicians and clinical settings. A Clinical Prediction Rule (CPR) is "a clinical tool that quantifies the individual contributions that various components of the history, physical examination and basic laboratory results make towards the diagnosis, prognosis, or likely response to treatment in an individual patient". These tools aim to facilitate clinical decision-making in the assessment and treatment of individual patients and are thought to be of greatest potential when they are developed and utilized for clinical conditions that involve complex clinical decision making.

KEYWORDS: *Clinical trials, physiotherapy management, clinical application, performance, patient populations.*

1. INTRODUCTION

Physiotherapy treatment frequently involves prescription of exercises so it is important to distinguish between exercises that constitute physical activity for treatment from counselling and programs to increase overall physical activity for health promotion and lifestyle behaviour change. When we refer the physical activity interventions for health promotion we are referring to non-treatment physical activity and not the exercises and physical activity that forms part of usual care of a musculoskeletal problem. 9 Physical activity promotion in primary care Primary health care practitioners are ideally positioned to promote physical activity as a health promotion measure, and their patients are often inactive and at higher risk for developing chronic disease. However, the focus of this thesis will be promotion of physical 8 activities in the

primary care setting, specifically in the physiotherapy setting. To date these primary care practitioners have been relatively under-utilized in physical activity promotion strategies and yet they appear to be ideally suited to this role. The physiotherapy outpatient setting provides a unique opportunity to provide physical activity interventions. Physiotherapists see large numbers of people both in public and private settings. While people most often present to these settings for management of a musculoskeletal problem such as a sprained ankle or low back pain, they may also have other co morbidities or risk factors for chronic diseases. Physiotherapists generally see their patients on a number of occasions (e.g. 4-6) for musculoskeletal problems. During each treatment occasion the physiotherapist elicits information about the presenting problem as well as implementing treatment interventions. It would be feasible to add an evaluation of physical activity behaviour, e.g. using the International Physical Activity Questionnaire, during assessment or between sessions and incorporate brief physical activity counselling advice and instructions into the treatment sessions. In contrast, general practitioners usually see people for consultations of shorter duration and less frequently and have greater time constraints.

2. REVIEW OF LITERATURE

Bailey DM, reported that the terms used included frozen shoulder, adhesive capsule it is, physiotherapy, physical therapy, shoulder outcome measures, shoulder pain, exercise classes, stretches, rehabilitation, exercise and compliance". In addition, the reference lists of articles identified through the above process were also searched town cover any further relevant literature. Eligibility criterion was set as English language and the title and abstract fields were included in the search. of their search papers retrieved 50% of references were over ten years old. Frozen shoulder, or adhesive capsule it is, was defined in the seminal work of Reeves as a condition of uncertain etiology characterized by the spontaneous on set of pain with significant restriction of both active and passive range of movement of the shoulder. Duplay said that the initial description of the painful and restricted shoulder. Codman first introduced the term frozenshoulderin1934anddescribed it as "a condition difficult to de fine, difficult to treat and difficult to explain from the point of view of pathology. In 1945, Neviaser coined the term,, adhesive capsule it is the orising that this pathology results from thick eningand eventual contracture of the gleno humeral capsule to reflect this finding sat surgery and autopsy, in patient striated for a painful stiff shoulder. Nobuhara (2003) has also reviewed the terminology surrounding frozen shoulder. The condition is known as 50s shoulder in Japan. According to an eighteenth - century source, Rigenshuran, defines 50s shoulder as "pain in the arm and joints which develops at a boutage 50 at times, but improves after a while without the administration of drugs".

3. CLINICAL FEATURES

In clinical practice, the tendency is to label any patient with a stiff and painful shoulder as a case of frozen shoulder. For years, much of the literature has referred to

frozenshoulder as a self-limiting disease but the duration and severity may vary greatly. Even these studies describe the process as last Inga minimum of 12 – 18 months, before resolution. However there are those who suggest that it can last for as little as 6 months Binderetal (1984) described frozen shoulder classically lasting for 18 – 24 months. Other studies have however challenged this popular belief. Simmonds (1949), Reeves (1975) and Shaffer et al (1992) agree that it can last two to three years, although report significant number so people have residual clinical detectable restriction of movement and smaller numbers‟ have residual disability (at seven years 50% had mild pain, stiff nessor both).The clinical picture seen commonly by physiotherapists is characterized by this pontaneouson set of shoulder pain and progressive global stiffness of the gleno – humeral joint, accompanied by decreased function and significant disability.The presence of night pain leads to disturbance of sleep and often difficulty lying on the affected shoulder. As there striation in the motions increases, more difficulties are encountered with activities of daily living.Routine radio graphs are typically normal. These are important to rule out serious pathology, abnormalities in the bone, joint or in the local soft issues e.g. calcific deposit and area prerequisite to a definitive diagnosis of frozen shoulder.

Physiotherapy has traditionally been part of the routine aftercare provided to patients following elective, primary total hip arthroplasty for osteoarthritis. Total hip arthroplasty itself is an increasingly common procedure and the numbers of patients undergoing the procedure is expected to continue to rise. Several issues have recently arisen relating to the rehabilitation of patients following hip joint arthroplasty. The length of hospital stay following surgery has reduced, thus compressing the time available for in-patient rehabilitation. Furthermore, research now indicates that outcome following total hip arthroplasty is less satisfactory than previously assumed, with patients experiencing considerable functional impairment post operatively when compared with their peers. The effectiveness of physiotherapy following discharge from hospital lacks evaluation. The uncertainty regarding effectiveness subsequently makes it difficult for commissioning organisations, health care practitioners and patients to make decisions regarding rehabilitation and service provision in the India varies widely.Firstly, to evaluate existing evidence regarding post discharge physiotherapy exercises. Secondly, to contribute to the evidence base for this under-researched, but increasingly common, area of physiotherapy practice by developing and evaluating a new physiotherapy intervention. Thirdly to assess the feasibility of achieving blind outcome assessment in a pragmatic rehabilitation trial

4. MANAGEMENT OFFROZEN SHOULDER

Many studies have attempted to establish the most effective treatment for frozen shoulder but much debate still remains. Currently there is no agreement on the standard management of this condition. The lack of consensus on diagnostic criteria and concordance in clinical

assessment complicates treatment choices. The controversy is due in part to a failure of many authors to precisely define and accurately identify frozen shoulder among other causes of shoulder pain and stiffness. Orthopedic and physiotherapy interventions or treatment modalities have been advocated in the management of frozen shoulder in the past thirty years, to alleviate the signs and symptoms and aid recovery.

There is a considerable body of work devoted to the orthopaedic management of this condition but the aim of this study is to focus on the conservative physiotherapy management. Therefore, only aconcisere view of orthopaedic management follows. Initially, treatment is directed at pain relief. Non-steroidal anti-inflammatory drugs (NSAID‟s) are traditionally given but there are no randomized control trials that confirm the effectiveness of these. Oral corticosteroids have been recommended but little evidence exists to support their routine use. Suprascapularnerve block and steroid injection have been suggested by some authors. However, this approach alone has not been shown to improve the range of shoulder motion. Orthopaedic interventions that have been shown to produce successful out comes in restoring function include; distension arthrography, manipulation under anaesthetic (MUA) and arthroscopic release. Distensionarthrography was described by Andren and Lund berg as early as 1965 and has been advocated as a means of expanding the contracted capsule. Rizketal (1994) promoted it as a promising treatment. They performed a study of 16 patients and found that 13 experienced immediate pain relief and increased shoulder mobility. This was also found by Buchbinderetal (2004) who demonstrated a significantly greater improvement in pain, function and active range of movement (ROM) in the group that received distension at three and six weeks.

As most of the studies used complex interventions and combined treatment modalities, they argued that it was difficult to determine which elements of physiotherapy were efficacious. Greenetalalso highlighted this in their Cochrane review of physiotherapy interventions for shoulder pain. This review has been updated in 2009; however there was no change to the conclusions. They stated that it is unusual for shoulder disorders to receive a single treatment in isolation, demonstrating a conflict between validity and clinical practice. They identify this as one of the key are as to improve future research, along with larger trials of higher methodological quality, well-defined interventions and avail dated inclusion / exclusion criterion. They concluded that there was no evidence that physiotherapy without concurrent interventions, such as corticosteroids, was of benefit for frozen shoulder. They stressed the need for trial so physiotherapy interventions for specific clinical conditions associated with shoulder pain. These authors examined different types and combinations of treatments over different time periods and used a variety of self-report instruments to assess pain, function and quality of life. It is still unclear from these papers which interventions may be most effective. Both the number and diversity of treatments, which have been recommended, reflect the

extremely general nature of the physiotherapy treatment for frozen shoulder. Therefore, there is yet no definitive agreement on the most effective form of treatment.

Physiotherapy management aim store lieve pain, promote healing, reduce muscle spasm, increase joint range of motion and streng then weakened muscles and ultimately to prevent and treat functional impairment. These include : heat o rice applications ; Ultra sound ; Interferential therapy ; Transcutaneous Electrical Nerve Stimulation (TENS) ; pulsed electromagnetic field therapy ; active and passive ROM exercises; Proprioceptive Neuro muscular Facilitation (PNF) techniques ; manual physical therapy and laser therapy.

5. EXERCISE THERAPY

Killian O demonstrates considerable variability in methods of treatment; however, it has been shown for some time that virtually all of the mad vacate some form of exercise to restore movement. In clinical practice, exercises are almost always incorporated into the physiotherapy management of a patient with frozen shoulder. Whilst exercise is undoubtedly an important adjunct to treatment, its effectiveness as a sole treatment for frozen shoulder has not been thoroughly evaluated. One group involved passive stretching and manual mobilization (stretching group) with supportive therapy and the second with are gime including active and auto-assisted exercises, with in the pain limits (supervised neglect group). All patients were followed-up for 24 months after the start of treatment. In the patients treated with supervised neglect, 89% had normal or near – normal painless shoulder function (Constant score > 80) at the end of the observation programme 64% reached this result with in 12 months. In contrast, in the group receiving intensive physiotherapy treatment, only 63% received a score of 80 or more after 24 months. The authors concluded that supervised neglect yields better out comes than intensive physiotherapy and passive stretching in patients with frozen shoulder. However, they do not state where or how the sample was obtained, the frequency of treatment sessions or the compliance of patients. Physiotherapy treatment frequently involves prescription of exercises so it is important to distinguish between exercises that constitute physical activity for treatment from counselling and programs to increase overall physical activity for health promotion and lifestyle behaviour change. When we refer the physical activity interventions for health promotion we are referring to non-treatment physical activity and not the exercises and physical activity that forms part of usual care of a musculoskeletal problem. Physical activity promotions in primary care Primary health care practitioners are ideally positioned to promote physical activity as a health promotion measure.

6. CONCLUSION

Confidentiality was maintained at all times with regard to patient information. Patients cannot be identified on this system as participating in the study. The use and storage of study information on a home computer was backed by floppy disc and password protected. Patients have the right

under Caldecott to view their current written physiotherapy records but this was not requested by any of the patients in the study.The debate on the effectiveness of physiotherapy in the treatment of frozen shoulder continues. The length of physiotherapy intervention and the stage at which it may be appropriate, has not been justified thus far in the research. Based on the limited quality of high grade evidence, it has been concluded that for many patients with frozen shoulder, home exercises will result in major improvements, sparing many patients from more aggressive and higher risk treatments.The research study considered three interventions commonly used by physiotherapists in the treatment of frozen shoulder. The results suggest that an exercise class is superior in relieving the signs and symptoms of frozen shoulder. Therefore, it seems reasonable to use a hospital based exercise class aimed at a rapid recovery rate with a minimum number of visits to the hospital after which a follow up period with a home based exercise programme would be recommended.

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