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STUDIES ON THE ALTERNATIVE OF MEDICINAL FOR CHRONIC LOWER BACK PAIN

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ABSTRACT

Rashid MH, Rahman M, Rahman MA, Hoq M (2012) Studies on the alternative of medicinal for chronic lower back pain. *J. Innov. Dev. Strategy*. 6(1), 98-102.

A study was conducted on the combined Alternative system of medicinal for the treatment of chronic mechanical Lower Back pain in Bangladesh. The objectives of the study were i) to find out the causes of previous treatment failures, ii) to assess the impact of alternative medicine on the previous treatment failure cases and iii) to evaluate the benefits of proposed treatment. The works were done with 150 patients under 3 age groups of 30-39, 40-49 and 50-60 years. The treatment nature was of Combined Therapeutic Treatment (CTT) and traditional Therapeutic Treatment (TTT). For age group 30-39 population stated success level of CTT is significantly higher than that of TTT. About 67% patient received CTT and obtained treatment benefit which was 14.3% higher than the patient of with TTT. For age group 40-49 years of population showed success results about 74.2% those who received CTT, which were higher than the patients in the same group with the traditional therapeutic treatment. This indicates that satisfaction level among the CTT group was higher than the TTT group. For age group 50-60 yrs of aged population showed success results about C1, TTT and C2, CTT patients shown treatment satisfaction level with CTT is significantly higher than that using TTT. About 67.7% patient of Group C2 received CTT showed satisfactory result 13.7% higher than the patient of C1 receiving TTT. Some of the study population obtained mild to moderate satisfactory level for TTT and CTT respectively. In the first week average results of CTT reported 36.3% less pain; in the second week pain remission reported 59.6%, in the third week pain remission reported 67.2%, and finally in the fourth week pain remission reported 77.2%. It is recommended that the CTT has great scope for the successful treatment on the chronic failure cases of Lower Back Pain.

Key words: Combined Therapeutic Treatment (CTT), Therapeutic Treatment (TT), Lower Back Pain (LBP)

INTRODUCTION

Mechanical low back pain is one of the most common complaints, accounting more than 12 million cases annually in the USA. The research results (Asher and Burton, 2006) reveal that about two thirds of adult's populations are affected by mechanical low back pain at some point in their lives. Chronic mechanical Low back pain reportedly occurs at least 85% once in life time most commonly between the age group of 30 to 60 years old and in another statistical report said about 15-20% of Americans have at least one episode of back pain per year. Of these patients, only 20% provide precise patho-anatomical diagnosis. A small proportion of low back population however develops chronic pain and disability. Once low back pain has been present for more than a year few people with long-term pain and disability return to normal activities as previously explained by Spengler (1983) and Carey *et al.* (1995). It is this group who account for the majority of the health and social costs associated with low back pain. What has been less clear is how low back pain should be managed in people whose pain and disability has lasted for long time. This guideline covers the management of persistent or recurrent low back pain defined as non-specific low back pain that has lasted for more than 6 weeks, but less than 12 months. Since many, researchers have been trying to clue out the appropriate treatment options for the chronic mechanical LBP but yet little is done about it. Therefore, as a consequence of treatment patients seek traditional treatment options and accustomed with the placebo treatment involving herbal, tube sucking, folk practices and inversely develop economical, mental and physical disabled. In the U.S itself, about 80% of the population is suffering from back pain during their adulthood and about 1% of the affected people will experience from back syndromes. The annual incidence of mechanical LBP is about 15-20%. According to sex criteria, female are affected more than the male. It has been noticed that in the early stage of LBP is self-limiting, recovery rate is 15% by two weeks, 90% of them recover by six weeks (Chou *et al.* 2007). If a patient stays off-work for more than two years due to chronic mechanical LBP then the patient is unlikely to return to his original works (Hazard *et al.* 1996). The socio-economic impact of back pain is enormous, complex and devastating conditions affecting about 18% of the population in the Scotland. In Bangladesh its number is more than 20%. It has a great harmful effect on health, employment and daily activities of living, in the context the present piece of research was conducted with the following major objectives i) to find out the causes of previous treatment failures, ii) to assess the impact of alternative medicine on the previous treatment failure cases and iii) to evaluate the benefits of proposed treatment.

MATERIALS AND METHODS

The procedures used in this studies which were selected consulting the broad points previously recommended. A set of randomized three period crossover studies assessed the optimum impact of Combined Alternative medicine. The contrast studies were carried out from 1st January 2009 to 1st May 2011 at The NEW LIFE TRAUMA CENTRE, Merul Badda, at Dhaka, Bangladesh.

Patient's Selection Criteria

All 150 patients paid their optimum active participations whenever, they were needed in the treatment sessions and they helped in completing the study trial. Their mean age was 40.5, Body weight ranging from 60-70 kg, Mean height was 1.73 M (ranging 1.60- 1.8 m), and each sub-group was treated under the strict supervision of the researcher and his team members.

Grouping System

Total 150 patient were selected and tested all of them were reported to have chronic mechanical low back pain, all the population were male both married and unmarried of Bangladeshi Citizen, the age interval was 30 to 60 years. For the study purpose, the patients were divided into some groups in two stages. At the first stage total 150 patient were divided into three age groups, being 50 patients to each group at the age limits of Grp A, 30-39 yrs, Gr-B, 40-49 yrs, Grp-C, 50-60 yrs. Secondly each of these three age groups were farther divided into two subgroups containing equal 25 patients to using the TTT and CTT, the numbers were Subgroup; A-1/A-2, B-1/B-2, C-1/C-2, of the respective age groups.

Patient's Preparation for Traditional Therapeutic Treatment (TTT)

1. Short Wave Diathermy (SWD) -Patient's preparation, patient must be on side lying or supine rather than prone lying position and then place the positive electrode (disc) on the pain point and the negative one near to the positive disc, keeping distance from disc to disc was 7cm, on the lumbar spine for 15 minutes.
2. Lumbar traction, the traction forces applied on the patient's lumbar region depended on the-age, body weight, and disease conditions of the patient, but usually, for the lumbar traction 50% of the body weight used intermittent mode of traction force, 15 minutes for all age groups.
3. Ultra-sound therapy, therapeutic continuous ultra-sound mode applied on the patient's lower back at 1.0 w/square cm for 15 minutes, particularly at the pain point.
4. TENS-This was the most commonly pain relieving modality used in the physiotherapy department, the positive electrode must be on the pain point and the negative one is near to the positive one.

This treatment method followed as per suggestions of Atlas and Nard (2003) provided comparatively less significant improvement in this age category (30-39 years old) of the patients. 23 patients showed satisfactory improvement, 16 patients with very mild improvement and 11 patients shown no benefit.

Treatment of Combined Alternative Medicine

This is a combination of three treatment procedures consisting of electro-acupuncture, therapeutic and orthopedic maneuver along with traditional therapeutic procedures, which were used for the treatment of spinal musculoskeletal disorders especially in the lower back complications. Each age group received same combined Alternative Medicine till the end of the treatment sessions but improvement variations noted in each different age group.

Treatment modalities and procedure:

1. Short Wave Diathermy (SWD) Patient's preparation, patient must be on side lying or supine rather than prone lying position and then place the positive electrode (disc) on the pain point and the negative one near to the positive disc, keeping distance from disc to disc was 7cm, on the lumbar spine for 15 minutes.
2. Cyriax Orthopedic Maneuvers, for the lumbar spine and along with the other soft tissues techniques.
3. Lumbar Auto Traction, the traction forces applied on the patient's lower lumbar region to achieve decompression mechanism in the intervertebral disc. The traction forces depended on the patient's age, body weight, and disease conditions of the patient, but usually, for the lumbar traction 50% of the body weight was used at continuous mode for 15 minutes for all age groups.
4. Ultra-sound therapy with sonophoresis method using injection triamcetonolone acetone + non-Adrenaline solution of local anesthesia as a coupling media particularly at the pain point with the intensity of 1.0 w/cm + continuous mode for 15 minutes.
5. Electro-Acupuncture in the corresponding meridians of the lower back with other extra-meridian points prescribed for the treatment of LBP.
6. Back pain rehabilitation + education- about the correct posture of the back for both at work and home.

RESULTS AND DISCUSSION

The results obtained from the present research were analyzed and presented here in graphical forms.

Outcome of Treatments for Younger patients

The results obtained for 30-39 yr age patient for A1 Traditional Therapeutic Treatment and A2 Combined therapeutic Treatment, outcome of treatment shown bellow in the figs. 1 and 2. The results of a group show that the satisfactory level applying CTT is significantly higher than that of the TTT. About 67% patient of A2 group received CTT gained satisfactory result was 77.2% which was found to be 14.3% higher than the patient of A1 group received TTT (52.9%).

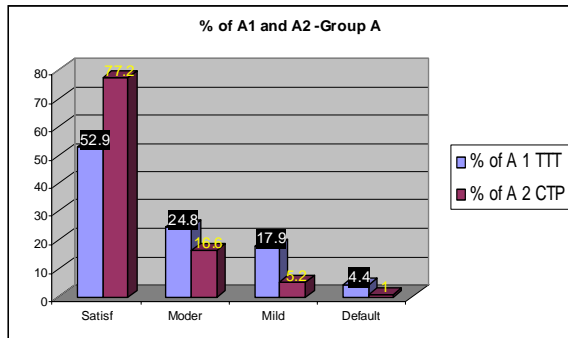


Fig 1. Traditional and combined therapeutic treatment between sub-groups of A1 and A2 as per type of treatment

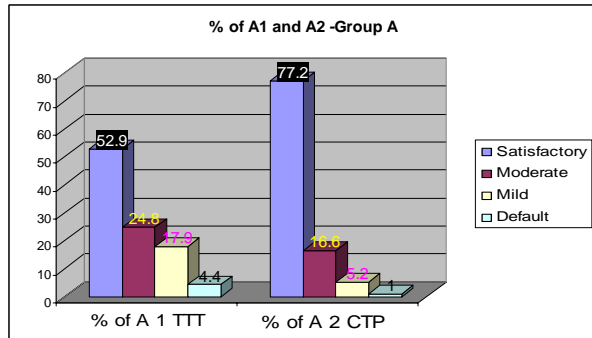


Fig 2. Traditional and combined therapeutic treatment between sub-groups of A1 and A2 as per effectiveness

The patients obtained mild to moderate treatment satisfaction which was 27.1% higher than the TTT (24.8%). Patients with no benefit are found to be 13.6% A1 and 7.1% in A2. Thus, CTT results mild to moderate satisfaction and no benefit respectively by 6.9% and was 6.8% lower than the TTT. This indicates that CTT reduced the amount of mild to moderate satisfaction and no benefit level by providing better result to these patients and significantly increased their satisfactory level.

Group B: Age group 40-49 yrs

The results obtained for 40-49 yr age patient for B1 therapeutic (TTT) and B2 combined therapeutic patients comparing the traditional combined therapeutic treatments are given in the Fig. 3 and 4. The results shown satisfaction level using CTT is significantly higher than that using traditional physiotherapy treatment. About 74.2% patient of Group B-2 received CTT gained satisfactory benefit higher than the patient of B-1 receiving TTT (50.3%). Patients obtained mild to moderate treatment satisfaction was 30.6% for TTT. Patients with no benefit were found 16% in Group B-1 TTT and 6% in Group B-2 CTT. This indicates that CTT reduces the amount of mild to moderate satisfaction and no benefit level by providing better result and significantly increasing their satisfaction level.

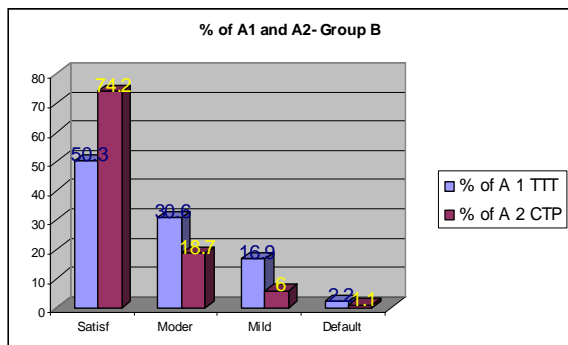


Fig 3. Traditional and combined therapeutic treatment between sub-groups of B1 and B2 as per type of treatment

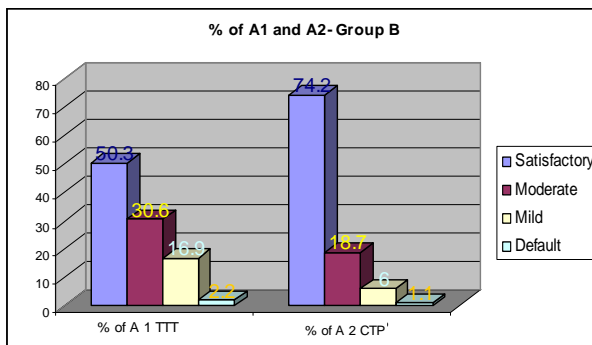


Fig 4. Traditional and combined therapeutic treatment between sub-groups of B1 and B2 as per effectiveness

Group-C Age group 50-60-years

The results obtained for 50-59 yr age patient for C1, TTT and C2, CTT patients comparing the traditional combined therapeutic treatments are given in the Fig. 5 and 6. The results show that For Group-C, treatment satisfaction level with CTT is significantly higher than that using TTT. About 67.7% patient of Group C-2 received CTT gained satisfactory result 13.7% higher than the patient of C-1 receiving TTT (48.3%). The portion of patients obtained mild to moderate satisfactory level is 33% and 25.2% for TTT and CTT respectively. Following treatment no benefit were found 15.6% in Group C-1, TTT and 5.1% in Group C-2, CTT. Thus, CTT results mild to moderate satisfaction and no benefit respectively by 5.6% and 5.1% lower than TTT. This indicates that CTT reduces the amount of mild to moderate satisfaction and no benefit level by providing better results and significantly increasing their satisfactory level.

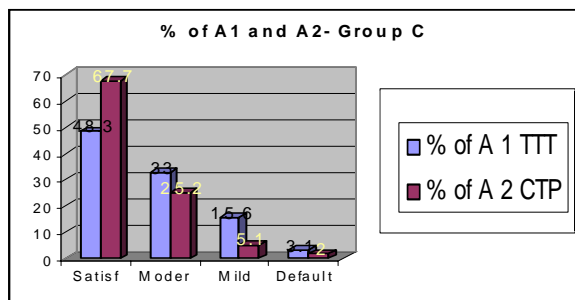


Fig. 5. Traditional and combined therapeutic treatment between sub-groups of C1 and C2 as per type of treatment

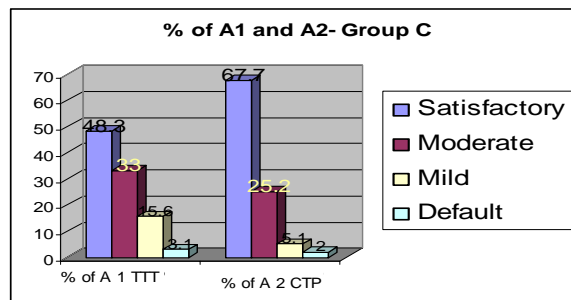


Fig. 6. Traditional and combined therapeutic treatment between sub-groups of C1 and C2 as per effectiveness

Group wise Effects

The results of the studies as per group of patients are mentioned here in the Fig. 7 and 8. The results indicate that it was in support of the positive role of acupuncture as an effective alternative therapy for chronic lower back pain.

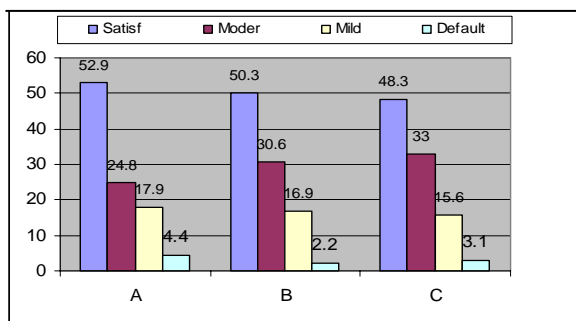


Fig. 7. Group wise treatment effectiveness for TP

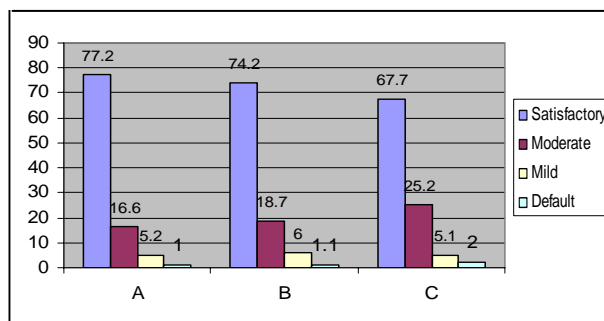


Fig. 8. Group wise treatment effectiveness for CTP

Pain Reduction Rate

First week of TTT, an average of 31.8% participants reported less pain, Second week pain remission 46.3%, third week pain reduction 49.6%, and finally at 4th week 52.9%. Macario and Pergolizzi (2006); Cherkin *et al.* (1998) reported similar rates of pain remission and reduction as they reviewed the issues in detail.

Outcome of Combined Alternative of Treatment

First week average results of Alternative of CTT, 36.3% participants reported less pain, second week pain remission 59.6%, third week pain reduction 67.2%, and fourth week 77.2%. Improvement noted with mild negligible residual discomfort. The mean Lower Back Pain-intensity followed a similar pattern although the mean values of the pain intensity score should be interpreted with some caution since it covers. Three categories are the proportions of patients who recovered, mildly or severely affected throughout the 12 weeks course. The highest frequencies of pain free participants were in weeks 10th and 12th. Similar findings were suggested for developing countries while they were working in related problems (Grifka *et al.* 2002 and Henschke *et al.* 2008, Manheimer *et al.* (2005).

CONCLUSION

Chronic back pain is a complex affecting about 20% of the population in Bangladesh in each year between the age group 30-60 years. It has a great harmful effect on individual health, employment and daily activities of living. Diagnosis of lower back pain is not simple and the clinical data collected may indicate complicate and lesions, with several factors contributing to the signs and symptoms. One common and possible cause of back pain is lumbar disc displacement, the mechanism of which is still poorly understood. Mechanical and ischemic factors are currently under investigation. This research study provided descriptive data about the management of some failure cases of chronic mechanical low back pain. Different treatment of Alternative medicine becomes a common practice for the management of MLBP in the developed and developing countries. Patients with chronic mechanical back pain syndromes, if not contraindicated- spinal manipulation may be the only treatment modality. More trials needed to confirm about the effectiveness of researched propose treatment. The prime duties of the researcher was to collect the victims of chronic mechanical lower back pain those who were considered as a failure cases and in later life of these patients become physical, socio-economical, psychological handicap. These victims need to be rehabilitating to make a healthy, self dependent and safe citizen of the country.

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