ejpmr, 2016,3(3), 299-301

SJIF Impact Factor 3.628

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Research Article

ISSN 2394-3211

EJPMR

EFFECTIVENESS OF VARMA THERAPY AND CONVENTIONAL EXERCISES ON OSTEOARTHRITIS OF KNEE - A PILOT STUDY

Dr. Maanickha Chelvi K. S.*

*Medical Consultant, Siddha Regional Research Institute, Puducherry.

***Correspondence for Author: Dr. Maanickha Chelvi K. S.**
Medical Consultant, Siddha Regional Research Institute, Puducherry.

Article Received on 22/12/2015 **Article Revised on 13/01/2016** **Article Accepted on 03/02/2016**

ABSTRACT

Osteoarthritis is common type of arthritis. It also disease of aging even though OA occurs in people of all ages, osteoarthritis is most common in people older than 65. Many people with OA use natural or alternative therapies to address symptoms and improve their overall well-being. These include nutritional supplements, acupuncture or acupressure, massage, relaxation techniques and hydrotherapy, among others. Varma therapy is one of the treatment modalities used in Siddha System of Medicine which is originated in southern part of peninsular land named in ancient times.. It is one the traditional system approved by WHO. Now it's practised in southern part of India. This study was focused to find out the efficacy of Varma therapy and conventional exercise on course of the disease in patients with chronic osteoarthritis of knee joint.

KEYWORDS: Osteoarthritis, Siddha, Varma Therapy, Convention Exercises

INTRODUCTION

Osteoarthritis is the most common articular disease which it affects about 20 million in world wide. It occurs in 30% of persons below 45 and 64, and 63-85% in those over 65 years. The extrapolated prevalence of osteoarthritis in India is around 7, 83, 14,013 for 106, 50, 70, 607 estimated population (US census bureau 2007). Pain is the primary complaint of individuals with chronic musculoskeletal disorders[1], and it is particularly important in the elderly because of its impact on quality of life, independence and social participation.

The economic burden of musculoskeletal pain is enormous, being only lower to that caused by cardiovascular disease.[2] Most individuals will present with "nonspecific pain", a condition in which it is not possible to identify a single specific cause for the pain, even when pain is restricted to one location (e.g. knee joint.[3] Strengthening exercise develops muscle tissue to protect the joints from further damage (Harvey Simon et al., (2007) Home based exercise therapy for older patients with knee osteoarthritis results greater significance.[4] Massage therapy for osteoarthritis of the knee improves WOMAC score significantly.[5] Exercise and dietary weight loss in over weight and obese older adults with knee OA more effective in improving physical function, pain, and mobility.[6] Extensive literature is available for various therapeutic modalities. From above evidences it shows that exercises improve quality of life in osteoarthritis of knee. Conventional exercises method has taken as standard control.

Varma therapy is one of the method of treatment is prevalent in southern parts of Tamilnadu and Kerala[8]; it's not well popularized as other traditional system of medicine.

It is one of the ancient martial art which is prevalent in Tamilnadu.[8], southern part of India.The stimulation of particular points in human body in appropriate pressure gives relief from the pain. Location of varma points are mentioned in varma literatures.[8-12] This varma therapy was taught by *Guru -Sisya [disciple] Parampara* .

MATERIALS AND METHODS

Study Design

Two groups, Group A and Group B experimental study design. Study was conducted at outpatient department of Kokila Siddha Research Centre and Hospital, Madurai. Study was conducted for a period of two weeks.

Subjects

A total 30 subjects who fulfilled selection criteria were allotted into two groups by simple random sampling method and out of them fifteen (15) were allotted in Group A and fifteen (15) in Group B.

Criteria of selection

Inclusive Criteria

- Age group between 40-60 years
- Unilateral or bilateral involvement
- Both sexes
- Patients with radiological evidence of osteoarthritis of knee.

Exclusive Criteria

- Fracture around the knee joint
- Limb length discrepancy
- Neurological disorders
- Cardio respiratory diseases
- Malignancy
- Osteoporosis

Therapeutic schedule

Varma therapeutic schedule for osteoarthritis of knee joint. The following varma points are stimulated one time per day. The pressure is mentioned in Varma literatures.

Varma points[8-12]

- Mootu varmam
- Santhi varmam
- Mozhi poruthu varmam
- Pathaippu varmam
- Ganapathy muga varmam
- Kuthirai nuni nakku varmam
- Kuthirai nakku adi varmam
- Ullangal vellai varmam
- Kavuli varmam

Variables

Independent Variables

Varma therapy with conventional exercises
Conventional exercises

Dependent Variables

Pain
Quality of life

Assessment Tools

WOMAC scale (Western Ontario and McMaster Universities Arthritis Index).[13]

Procedure

Both Group A and Group B subjects were involved for pre test assessment by WOMAC scale. 30 subjects were selected based on selection criteria and they were allocated into group A and B as 15 subjects in each group by simple random sampling method. Group A subjects were given Varma therapy with conventional exercises and group B subjects were given conventional exercises only. By the ends of 2 weeks treatment Programme, post test assessment was made and data were analysed using paired and unpaired‘t’ test and the difference in the efficacy of treatment were analyzed using rate of progression. The treatment Programme was given for a period of 2 weeks and one session per day. At the end of treatment Programme patients were involved for post test assessment.

Collection of Data

Patients who are fulfilling inclusion criteria and willing to participate in this study were assessed through WOMAC scale and data were stored. At the end of treatment, again WOMAC scale is assessed.

RESULTS

The following table shows the study results, that varma therapy is effective as conventional therapy. By the end of 2 weeks treatment program, post test assessment was made and data were analysed using paired and unpaired‘t’ test and the difference in the efficacy of treatment were analyzed using rate of progression.

Table: 1: DATA ANALYSIS AND INTERPRETATION WOMAC SCALE SCORE

Womac Scale Score	Pre-test Mean	Standard deviation of pre test values	Independent ‘t’ test value t=1.701	Post test Mean	Standard deviation of post test values	Independent ‘t’ test value t=1.701	Dependent ‘t’ test value t=1.761	Rate of progression
GROUP A	68.80	±4.07	0.2835	44.53	±4.88	7.4058	22.655	35.27%
GROUP B	68.40	±3.91		56.80	±4.16		15.771	16.95%

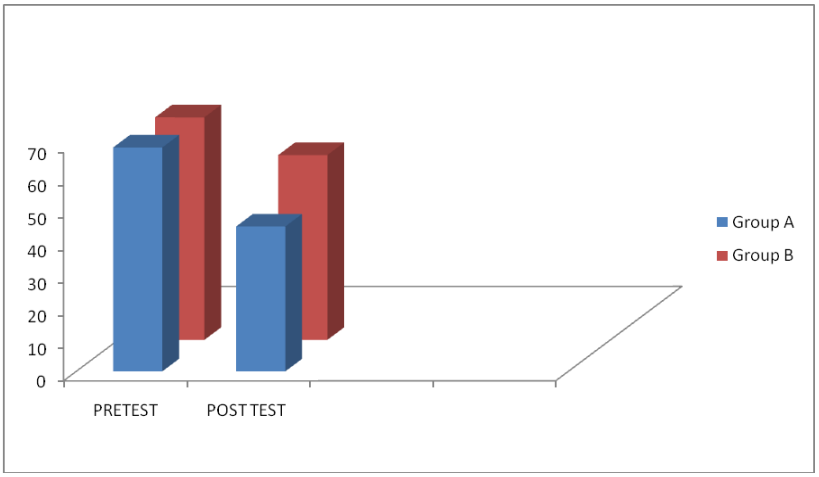

Table shows statistical results of WOMAC scale score in group A and group B

ANALYSIS OF RESULTS

Using Independent‘t’ Test.

a) Comparing pre test WOMAC scale score values of group A and group B:

Calculated‘t’ value (0.2835) is less than table value (1.701) at 5% level of significant for one tailed ‘t’ test showing that there is no significant difference between two groups.

b) Comparing post test WOMAC scale score values of group A and group B:

Calculated‘t’ value (7.4058) is greater than table value (1.701) at 5% level of significance for one tailed ‘t’ test showing that there is significant difference between two groups.

Using Dependent‘t’ Test

a) Comparing pre test and post test values of group A of WOMAC scale score values:

Calculated‘t’ value (22.655) is greater than the table value (1.761) at 5% level of significance for one tailed ‘t’ test showing that there is significant difference between two values.

b) Comparing pre test and post test values of group B of WOMAC scale score values:

Calculated‘t’ value (15.771) is greater than the table value (1.761) at 5% level of significance for one tailed ‘t’ test showing that there is significant difference between two values.

Using rate of progression

The rate of progression for group A is 35.27% and for group B is 16.95%

DISCUSSION

Analysis of results shows that there is a significant difference in both groups A and B in the score of course of disease. When we compare the rate of progression group A shows greater improvement in reduction in course of disease (35.27%) than group B (course of disease (16.95%).

Thus, the results of the present study showed that varma therapy with conventional exercise were superior to conventional exercise. This greater improvement in group A subjects on course of disease could be due to pain relief, reduction in stiffness, increased lubrication of joints, gain in the strength of weak muscles, correct mechanical loading, improved joint stability which consecutively increases quality of life.

CONCLUSION

Both varma therapy with conventional exercise and conventional exercise are effective to improve the quality of life and reduce the course of the disease in patients with chronic osteoarthritis of knee joint. There is considerable improvement on reduction in course of disease following varma therapy with conventional exercise program than conventional exercise . This has to taken to large popluation to achieve further results.

ACKNOWLEDGEMENT

Authors wish to Kokila Siddha Research Centre and Hospital, Madurai, India.

CONFLICT OF INTEREST

The author declares that there is no conflict of interest.

REFERENCES

1. Dellaroza M, Pimenta C, Matsuo T.Prevalence and characterization of chronic pain among the elderly living in the community,Cad Saude Publica., 2007; 23(5): 1151–1160.
2. International Association for the Study of Pain – IASP Global Year Against Musculoskeletal Pain, October 2009 – October 2010; Musculoskeletal Pain. IASP, Seattle., 2009; 2
3. Leboeuf-Yde C, Lauritsen J, Lauritzen T. Why has the search for causes of low back pain largely been nonconclusive? Spine., 1997; 22(8): 877–881

4. RJ Petrella, C Bartha - The Journal of rheumatology, 2000; 27(9): 2215-2221.

5. Perlman AI, Ali A, Njike VY, et al. Massage therapy for osteoarthritis of the knee: a randomized dose-finding trial. *PLoS One.*, 2012; 7(2): 30248.
6. Messter SP,Loeser RF,Miller Gd,Exercise and dietary weight loss in over weight and obese older adults with knee osteoarthritis: the arthritis ,diet and activity promotion trail. Arthritis Rheum., 2004; 50: 1501-1510.
7. Sharma L.Examination of exercise effects on knee osteoarthritis outcomes, Arthritic Rheum, 2003;255-260.
8. Dr.Kannan Rajaram,Varma maruthuva adippadaigal, A.T.SV.S. siddha maruthuva kallori, pudukkadai (po)., 2008; 1-78
9. Dr.Kannan Rajaram,Varma pulligalin Iruppidam, A.T.SV.S. siddha maruthuva kallori, pudukkadai(po)., 2008; 296-320.
10. Dr.Kannan Rajaram,Varma maruthuvam Sirappu, A.T.SV.S. siddha maruthuva kallori, pudukkadai(po)., 2008; 259-267.
11. Dr.KannanRajaram,Varma108, A.T.SV.S. siddha maruthuva kallori,pudukkadai(po)., 2008; 72-180
12. Dr. R.Thiyagarajan, ,Siddha maruthuvam-sirappu: varmam,1ed., Commissionerate of Indian medicine and Homeopathy, Chennai,1985; 129-158.
13. Scrimshaw S.V, Mahew C, responsiveness of visual analogue scale and McGill pain scale measures,manipulative physical therapy., 2001; 24(8): 501-4.