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Effectiveness of Moist Heat Therapy on Relieving Joint Pain among Arthritis Patients at Selected Hospital Vijayapura

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Abstract:- The joint pain is one of the major problems in India .they are so many reasons to develop joint pain. In aging disorder and nutritional deficiency like osteoporosis. National Arthritis Foundation estimates that nearly 50 million people currently suffer from some form of arthritis, and that figure is expected to grow to 68 million by the year 2030. Sedentary lifestyles, expanding waistlines, and the aging of body contribute to the increase in arthritis and the joint pain associated with arthritis.[1]

Aim: The present study was aimed to evaluate the effectiveness of moist heat therapy on relieving joint pain among arthritis.

Materials and Methods: The purposive sample technique was used in the study. The sample size consists of N = 50, and a quasi-experimental design was selected to carry out the present study. Data was analyzed by using inferential statistics in terms of mean median range and by distribution, chi-square test for association.

Results: Percentage distribution of study subjects according to their Age, it is observed that maximum no. of study subjects 18(36%) were in the age group 35-45 and minimum no. of respondents 9(18%) were in the age group 56-65.The Pre-Intervention Pain score among the study subjects.it was clear that out of 50 , 19(38%) of the study subject had mild pain and sever pain in each respectively and very few 12(24%)of them had moderate painit was clear that out of 50 , 19(38%) of the study subject had mild pain and sever pain in each respectively and very few 12(24%)of them had moderate pain. And the Post-Intervention Pain score among the study subjects.it was observed that after moist heat therapy, maximum 24(48%) of had no pain and 19 (38%) of then had mild pain score. Very few 7(14%) had Moderate pain. There were no study subject with severe pain.

Conclusion: The main aim of the study was to assess the effect of moist heat on joint pain among arthritis Patient in a selected BLDE'S Hospital. The intervention was given to the arthritis patients for 7 days after that continuous pain scale monitoring.

Keywords:- *Moist Heat Application, Pain, Arthritis, Old Age.*

I. INTRODUCTION

Over 50 million adults in America report that they experience one full day of pain each month many people turn to prescription or over-the-counter (OTC) drugs to relieve their pain. However, recent studies suggest that regular use of prescription or OTC pain relievers may increase the risk of cardiovascular disease. There is a need for non drug alternatives to relieve pain safely and effectively,[1]

Heat has been used therapeutically for thousands of years. It offers immediate pain relief and can increase circulation to speed the healing process after injury. For this reason, it is popular for use on many types of pain including joint and muscle pain as well as soft tissue damage.[2]

The effect of heat on pain is mediated by heat sensitive calcium channels. These channels respond to heat by increasing intracellular calcium. This, in itself, generates action potentials that increases stimulation of sensory nerves and causes the feeling of heat in the brain[3].

Arthritis causes many restriction of body, which include difficulty in floor level activities, ascending and descending stairs, squatting, etc. High impact activities, that include running or jumping can be detrimental and painful. These difficulties or limitations can significantly reduce the quality of life in an active individual[4].Current modes of treatment helps to decrease pain and improve functioning range from information, education, physical therapy and aids, analgesics, non-steroidal anti-inflammatory drugs, joint injections and knee replacement procedures in which all or part of the joint is replaced with plastic, metal or ceramic implants[5].Thermo therapies have been used in the conservative management of arthritis, the local stimulations of temperature sensitive receptors in the skin, impulses travel from the periphery to the hypothalamus and the cerebral cortex. The hypothalamus then initiates moist heat producing or heat reducing location of the body. The conscious sensations of temperature are aroused in the cerebral cortex. These interventions are effective by decreasing pain through moist heat applications and

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increasing large diameter nerve fibre input to block small diameter pain fibre messages by moist heat application[6].Most of the population in India is above the age group of 60 years. 95% of them are less than 85 years. In this 87% are having acute illness and 96% are having chronic illness. Hypertension, cataract and osteoarthritis were the 3 most common illnesses among older population in India[7].

II. AIM OF THIS STUDY

- To assess the level of pre interventional joint pain among arthritis patient.
- To assess the level of post interventional joint pain among arthritis patient.
- To find out effectiveness of moist heat therapy in relieving joint pain among arthritis patients.
- To find out the association between pre-interventional joint pain with selected demographic variables of arthritis patients.

III. MATERIAL AND METHODS

This was a Experimental Study conducted in Hospital with 50 samples were selected by purposive technique Quasi experimental design is selected to carry out the present study.

The design used is depicted as follows;

Experimental group O1 ---------- X---------O2

O1 – pretest assessment for joint pain for arthritis patient.

X – Administration of moist heat.

O2 – Posttest of joint pain for arthritis patient..

IV. RESULTS

A. Section A: Description of demographic variables of the patients .

Frequency and percentage distribution of study subjects according to their Age, it is observed that maximum no. of study subjects 18(36%) were in the age group 35-45 and minimum no. of respondents 9(18%) were in the age group 56-65.Frequency and percentage distribution of study subjects according to their Sexits clear that maximum no of study subjects 28(56%) were males and remaining 22(44%) were females.

Frequency and percentage distribution of study subjects according to their occupation.it was noted that, maximum no of study subjects 18 (36%) were clerical /farmer/shop owner and minimum no of study subjects 8 (16%) were labor. 12 (24%) of them were housewife and retired respectively.

Frequency and percentage distribution of study subjects according to their Area of living.it is observed that maximum no. of study subjects 30(60%) were from urban area and remaining 20(40%) were from rural area.Frequency and percentage distribution of study subjects according to their duration of illness.it was noted that, maximum no of study subjects 20(40%) had duration of illness less than 1 year. 15 (30%) out of 50 study subjects had duration of illness above 11 years. Out of total 10(20%) of them had duration of illness between 1 to 5 years and very few 5(10%) had duration of illness between 6-10 years.

Frequency and percentage distribution of study subjects according to BMI.it was observed that maximum no. of study subjects19 (38%) were under weight. Out of 50 only 12 (24%) of them had normal weight. 12(24%) of the study subjects were obese and very few 7(14%) were overweight.

B. Section B

Table 1: Assessment of level of pre intervention pain score without moist heat application

Pain level	Frequency	Percentage
Mild	19	38%
Moderate	12	24%
Severe	19	38%
Total	50	100%

Pre-Intervention Pain score among the study subjects.it was clear that out of 50 , 19(38%) of the study subject had mild pain and sever pain in each respectively and very few 12(24%)of them had moderate painit was clear that out of 50 , 19(38%) of the study subject had mild pain and sever pain in each respectively and very few 12(24%)of them had moderate pain

C. Section C

Table 2: Assessment of level of pain after moist heat application

Pain level	Frequency	Percentage
No Pain	24	48%
Mild	19	38%
Moderate	07	14%
Total	50	100%

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Post-Intervention Pain score among the study subjects.it was observed that after moist heat therapy, maximum 24(48%) of had no pain and 19 (38%) of then had mild pain score. Very few 7(14%) had Moderate pain. There were no study subject with severe pain.

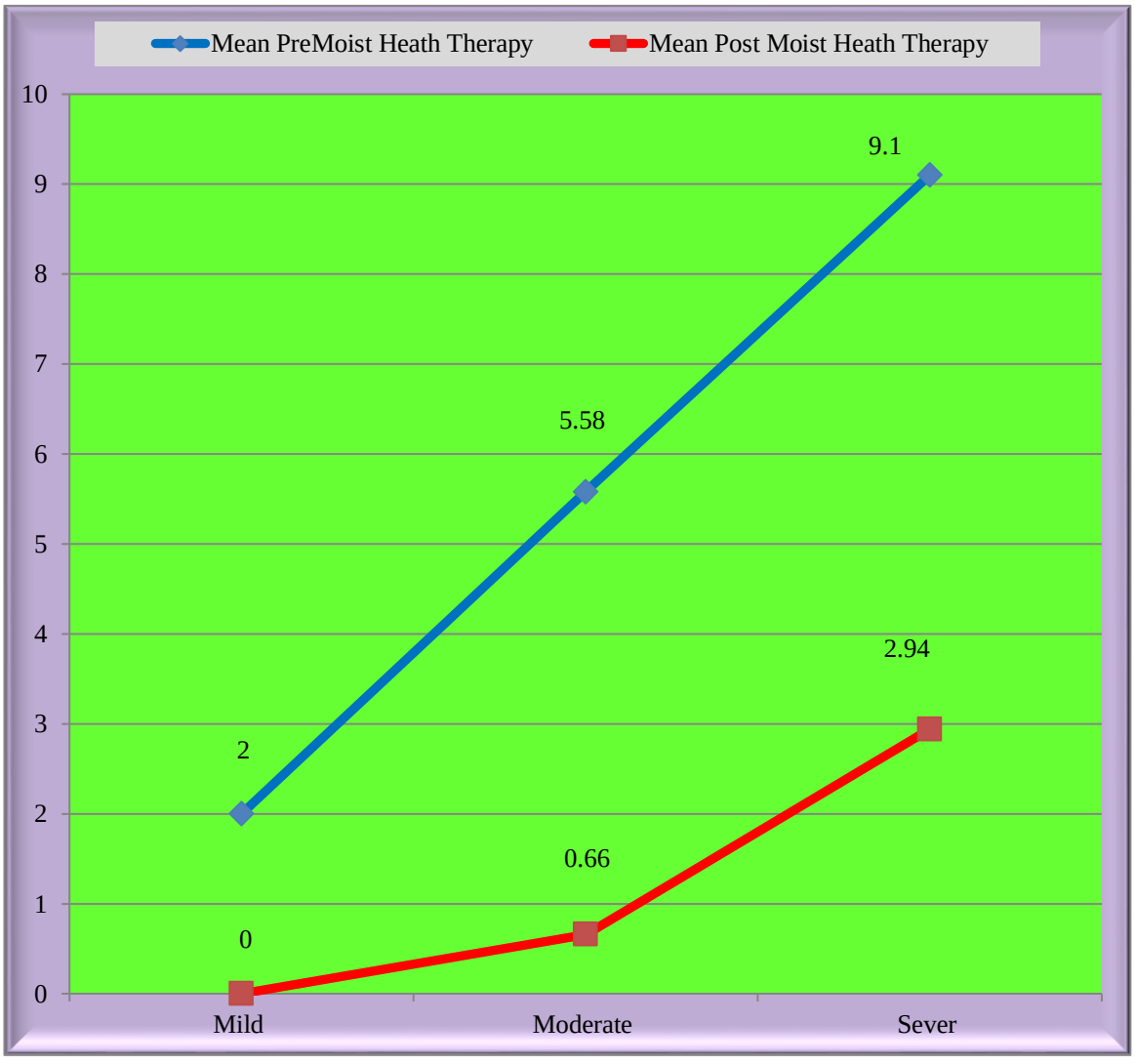
D. Section D

Table 3: Effectiveness of moist heat application 0n joints

	Paired difference					t-value	d.f	p-value
	Mean	S.D	S.E	95% confidence interval of the difference				
				Lower	Upper			
Pre V/S Post Pain level	4.28	2.03	0.28	3.70	4.85	14.903	49	<0.0001

After moist heat therapy mean paired differences in pain score was 4.28 with difference in standard deviation was 2.03 indicates that moist heat therapy is effective in reducing pain level among arthritis patients as its p-value is less than 0.0001 which was highly significant.

E. Section E diagram 1 -distribution of according to pre and post of moist heat therapy



Distribution of study subjects according to mean pre and post moist heath therapy among patients. . Reveals that mean post level score is low in all the categories of pain level after moist heath therapy which was statistically significant as p-value is less than 0.0001.

F. Section F

Table 4: Association between the pain score level among and socio demographic variable

Variables	Level of knowledge		Total	d.f	Chi-square	p-value
	< M	> M				
Age (years)						
35-45	18	0	18			
46-55	09	03	12			
56-65	03	06	09	3	52.86	**<0.0001(S)**
Above 66	01	09	11			
Sex						
Male	18	10	28			
Female	13	09	22	1	0.14	0.707(NS)
Education						
primary	05	02	07			
High school	10	10	20			
Higher primary	11	05	16	3	2.06	0.56(NS)
Graduates	05	02	07			
Occupation						
Labour	07	01	08			
C/F/S	15	03	18			
Housewife	09	03	12	3	26.12	**< 0.001(S)**
Retired	0	12	12			
Area of living						
Rural	13	07	20			
Urban	18	12	30	1	0.127	0.77(NS)
Religion						
Hindu	21	09	30			
Muslim	10	07	17	2	5.6	0.056(NS)
Christian	03	00	03			
Duration of illness						
< 1 year	20	00	20			
1-5 years	10	00	10	3	46.6	**< 0.001(S)**
6-10 years	01	04	05			
Above 11 years	00	15	15			
Alcoholic						
Yes	28	10	38	1	9.17	**<0.002(S)**
No	03	09	12			
BMI						
Under weight	19	00	19			
Normal weight	12	00	12			
Over weight	00	07	07	3	50.0	**<0.001(S)**
Obese	00	12	12			
Diet type						
Vegetarian	24	01	25			
Non-vegetarian	02	06	08			
Mixed	05	12	17	2	24.5	**<0.001(S)**
Appearance						
Lean	23	04	27			
Obeys	08	15	23	1	13.39	**<0.001(S)**
Smoking habit						
Yes	09	07	16			
No	22	12	34	1	0.56	0.75(NS)

S*-Significant association, NS-Not Significant

From table no 16,it was clear that there were no association between level of pain with sex, education,area of living and religion but there was high association between level of pain with age, occupation, duration of illness, alcoholic , BMI, Diet Type and appearance at 5 % level of significance.

ISSN No:-2456-2165

V. DISCUSSION

The respondents after moist heat therapy, maximum 24(48%) of had no pain and 19 (38%) of then had mild pain score. Very few 7(14%) had Moderate pain. There were no study subject with severe pain.After moist heat therapy mean paired differences in pain score was 4.28 with difference in standard deviation was 2.03 indicates that moist heat therapy is effective in reducing pain level among arthritis patients as its p-value is less than 0.0001 which was highly significant.

VI. CONCLUSION

The study highlights the usage of moist heat therapy which is the best treatment for people who suffer from joint pain. Modern medical science treats the joint pain with too expensive medications and regular medical check-ups which seems to be challenging. Thus, a better compliment for this health problem is through the self care, i.e. by the taking moist heat therapy . Complimentary therapies like moist heat therapy are better in the treatment of arthritis, which in turn prevents the joint pain as one of the major burden of problem in developing and developed countries.The main aim of the study was to assess the effect of moist heat on joint pain among arthritis Patient in a selected BLDE'S Hospital. The intervention was given to the arthritis patients for 7 days after that continuous pain scale monitoring.

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