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RESEARCH ARTICLE

AN OBSERVATIONAL STUDY OF OPD MANAGEMENT VERSUS HOME MANAGEMENT IN LOW BACK ACHE PATIENTS

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Abstract

Objective: To study the effectiveness of OPD management versus home management in low back ache patients.

Material and Method: Participants aged between 27 to 55 years suffering from low back pain for more than 3 months were inducted in the study. They were divided into two groups, one which was provided intervention at home and the other which was given physiotherapy in OPD setting.

Interventions: A pre and post assessment was done at 4 months based on Oswestry low back pain disability questionnaire. Analysis was done by application of Independent sample t test. P value less than 0.04 was taken as significant.

Results: A total of 10 participants were equally divided for OPD and home management. Oswestry low back pain disability questionnaire was administered pre and post intervention and Independent T test was applied to find the difference between the mean pre test and post test scores for OPD and home managed patients which were taken 4 months apart. A significant difference was observed as p value was < 0.00.

Conclusions: The study concluded that OPD management for chronic low back ache not only reduce the pain but also reduces chance of disability. But patient satisfaction was higher in home manage group in comparison to OPD in personal care.

Introduction:-

Low back pain (LBP) is a common disorder involving the muscles, nerves, and bones of the back.[1] Pain can vary from a dull constant ache to a sudden sharp feeling.[1] Low back pain may be classified by duration as acute (pain lasting less than 6 weeks), sub-chronic (6 to 12 weeks), or chronic (more than 12 weeks).[2] The condition may be further classified by the underlying cause as mechanical, non-mechanical, or referred pain.[3] The symptoms of low back pain usually improve within a few weeks from the time they start, with 40–90% of people completely better by six weeks.[4]

In most episodes of low back pain, a specific underlying cause is not identified or even looked for, with the pain believed to be due to mechanical problems such as muscle or joint strain.[5][3] If the pain does not go away with conservative treatment or if it is accompanied by "red flags" such as unexplained weight loss, fever, or significant problems with feeling or movement, further testing may be needed to look for a serious underlying problem.[3] In

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most cases, imaging tools such as X-ray computed tomography are not useful and carry their own risks.[6][7] Despite this, the use of imaging in low back pain has increased.[8] Some low back pain is caused by damaged intervertebral discs, and the straight leg raise test is useful to identify this cause.[3] In those with chronic pain, the pain processing system may malfunction, causing large amounts of pain in response to non-serious events.[9]

The largest cause of work-related absence and one of the most common medical problems [10] affecting 8 out of 10 people at some point during their lives is low back pain. Low back pain means a pain, or ache, anywhere on the backside of body, in between the bottom of the ribs and the top of the legs,[11] the pain can come on suddenly, slowly or be the direct result of a fall or injury. In most cases, the pain lasts from a few days to a few weeks and usually clears up after about six weeks. Area of Lumbar spine encompasses the distance from the 1st lumbar vertebra to the 1st sacral vertebra. The most frequent site of low back pain is in the 4th and 5th lumbar segment. It is predicted that it will affect up to 90% of the world's population at some point in their lives, mostly affecting the age group between 35 and 55 years. [12] Risk factors for LBP include heavy physical work, frequent bending, twisting and lifting; and prolonged static postures. Psychosocial risk factors include anxiety, depression and mental stress at work.

LBP can be arbitrarily divided into acute, sub-acute or chronic, depending on the duration of the complaints. Acute LBP persists for less than six weeks, sub-acute is between six weeks and three months and chronic LBP lasts longer than three months. It is believed that 80-90% of LBP episodes are acute and resolve within six weeks irrespective of the administration or type of treatment. However 5-10% of LBP patients will develop chronic problems.

T M. Damush et al 2003 found that self-management program can improve and maintain functional status, mental functioning, and self-efficacy to manage future symptoms for 1 year among primary care patients with ALBP.[13] K. Cooper et al 2008 determined the patient-centeredness from the patient's perspective in the context of physiotherapy for chronic low back pain. There were 25 patients who received physiotherapy for low back pain within 6 months. There was evidence of betterment in chronic low back pain. [14]

Physiotherapy is one of the effective plans for LBP and can be provided at home as well as in OPD. Exercises and some physiotherapy modalities like hot or cold therapy [15] can be given in some cases, pain modulating agents like TENS [16] can be used for temporary pain relief. Postural control is taught to the patient to overcome any muscle imbalance.

Material and Method:-

In this study, total 10 patients of low back pain were involved. In which 5 patients received physiotherapy sessions at Kanpur Physiotherapy Centre, Kanpur and other 5 patients followed only home programme management. The duration of study was four months. Patients were selected having age between 27 to 55 years and having LBP more than three months of duration. Patients coming to the OPD of Kanpur Physiotherapy Centre were included in this study. Those who fulfilled the inclusion criteria were asked to sign the informed consent after being explained the objectives and duration of the study. On the choice of the participants they were assigned either the OPD management group or home management group. All the participants were interviewed and were asked to fill the questionnaire at the time of induction in the study. The questionnaire consisted of close ended questions, First part recorded the demographic profile of the patients and the second part of Questionnaire was based on reliable standard scale (Oswestry low back pain disability), one of the most commonly used outcome measures for individuals with low back pain. The Oswestry Questionnaire encloses ten questions about patients. On every question the patient can choose out of 6 possible answers, but only one can be marked. When the patient doubt of several possibilities, they should mark the one which fits the best. For every part, score is minimal 0 and maximal 5. The lower the score the less restrictions, patient experiences during his daily activities. The sample of 10 participants was divided into two groups, one coming to OPD continuously for physiotherapy treatment while other group was given home programme only (but they came at regular interval for follow ups). Than after four months patients were re-examined at Kanpur Physiotherapy Centre and were asked to fill the same questionnaire. Mean and standard deviation was taken out for the numerical variables whereas frequencies and percentages were taken out for categorical variables. Pooled and Paired t test was applied for finding the difference in the mean scores of pre and post test of home versus OPD management groups. P value less than 0.04 was taken as significant.

Results:-

A total number of 10 patients were participated in this study. Male patients were 4 and female were 6. The patients were selected on the basis of chronic low back ache more than three months. Independent T test was applied to find the difference between the mean pre-test and post-test scores for OPD and home managed patients which were taken four months. A significant difference was observed as p value was < 0.000. When paired t test was applied to find the difference in the pre and post home scores of home managed group mean score for pre-test was 25.31+ 5.8 and for the post-test was 05.27+ 5.2 with a highly significant p value of 0.000. When paired t-test was applied to find the difference in the pre and post home scores of OPD managed group mean score for pre-test was 08.31+ 8.7 and for the post-test was 10 +7.8 with a highly significant p value of 0.000.

When intensity of pain was compared between the pre-test and post-test and type of pain management there was a reduction of severity of pain from 30% (n=3) to 20% (n=2) in OPD treated patients as compared to home treated patients where reduction was seen from 20% (n=2) to 30% (n=3). Significant reduction in the number of people suffering from pain was observed. Initially in the pre-test, n=5 of the people in the OPD management group had moderate to severe pain, number decreased to n=2 after 4 months. As compared to home management group where initially all the participants had moderate to severe pain after 4 months their number decreased to n=3. The effect of chronic pain on travelling when assessed revealed that n=4 were able to travel without any pain but after 4 months of intervention the number increased to n=8 in OPD managed group. Significant difference was observed in the home managed group where 50% of participants showed improvement after 4 months. Initially n=3 patients were able to sit without pain for longer duration of time in OPD group. After 4 months intervention another 5 patients showed improvement. Marked improvement was observed in home management group. Initially there was no one in this group who could sit without pain but after intervention n=6 patients were able to sit without pain for longer duration.

Discussion:-

The effectiveness of home management versus OPD management in low back ache patients was assessed using a self administered questionnaire. The two groups were followed over a period of four months and pre and post test were carried out on all the 10 patients.

In this study, the pain intensity was shown to improve from 40% to 8% in OPD managed group. French S, Cameron stated that heat therapy, cold compression therapy can reduce symptoms of acute and sub acute low back ache [17]. In our study, use of same modalities with manual therapy improved pain by 49%. Regarding home management, T.M. Damush et al **[18]** affirmed that self-management program can improve LBP. He conducted a research on long-term effects of a self-management program for patients with acute low back pain. Similarly in our study, the group following home programme in our study revealed 72% betterment in pain. When comes to personal care Damush TM **[18]** stated marked improvement in functional status, mental functioning, and self-efficacy when managed at home, in our study which revealed 62% improvement in personal care.

Ebadi S, et all concluded that the therapeutic ultrasound and exercise treatment for chronic non specific low back pain is beneficial and found both function (17%) and pain (24%) improved post treatment [19] . In our study showed 37% to 60% improvement in OPD managed group and 15% to 43% improvement in home managed group.

Conclusion:-

The study concluded that OPD management for chronic low back ache not only reduces pain but also reduces the chance of disability. But patient satisfaction was higher in home manage group in comparison to OPD in personal care.

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