EFFECTIVENESS OF GIVING ZYGAPOPHYSEAL MANIPULATION WITH IFT TO IMPROVE FUNCTIONS OF BACK - AN EXPERIMENTAL STUDY


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Abstract-
BACKGROUND: Backbone or Vertebral column formed by 33 bones. In many are non fused and some are fused. There 23 Inter-vertebral disc in human body. The backbone is maintain our body postural in rest and active of all positions. The muscles of backbone & abdomen and soft tissues structure are giving stability of our trunk. The Vertebral column connect our upper and lower extremities. As per Word Health Organization, Mechanical Low back pain (LBP) describes pain between the lower edge of the ribs and the buttock. It can last for a short time (acute), a little longer (sub-acute) or a long time (chronic). It can affect anyone by non pathological and over load on back like weight lifting or sudden movements.

AIM & OBJECTIVE: To find out effectiveness of giving zygapophyseal manipulation with IFT to improve functions of back.

Methodology: 20 subjects of age group 45 - 55 years were selected, who fulfilled the inclusion Criteria. Out of the 20 patients 15 subjects who were suffering from mechanical LBP and also those who scored between 35 - 45 in Back Pain Function Scale (BPFS). 15 subjects who selected were treated zygapophyseal manipulation with IFT for a period of 5 days. The pretest and post-test measurement was taken by using BPFS.

RESULT: The pretest and post-test mean values of BPFS scored was analyzed using the paired ‘t’ test. For 14 degrees of freedom and 5% level of significance, the table’s’ value is 1.729 and calculated ‘t’ value 17.31. Since the calculated’ value was greater than table’s’ value null hypothesis is rejected.

CONCLUSION: This study it can be concluded that zygapophyseal manipulation with IFT to improve functions of back.

Keywords: BPFS, Mechanical Low Back Pain, IFT, Zygapophyseal Manipulation, Vertebral Column.

INTRODUCTION:
Backbone or Vertebral column formed by 33 bones. In many are non fused and some are fused. There 23 Inter-vertebral disc in human body. The backbone is maintain our body postural in rest and active of all positions. The muscles of backbone & abdomen and soft tissues structure are giving stability of our trunk. The Vertebral column connect our upper and lower extremities. Zygapophyseal joints are synovial joint type and plain variety. There are 3 degrees of freedom in all Zygapophyseal joints, Totally six or combination of movements in minimal ROM. As per Word Health Organization, Mechanical Low back pain (LBP) describes pain between the lower edge of the ribs and the buttock. It can last for a short time (acute), a little longer (sub-acute) or a long time (chronic). It can affect anyone by non pathological and over load on back like weight lifting or sudden movements. Head-Arm-Trunk (HAT) weight transmission to pelvic by bio-mechanical description (As per LoG, CoG & Curvature of Vertebral Column). Soft tissues of vertebral column (Ligaments, Muscles & Tendons) support and maintain the normal alignment of the trunk. Any over load or force by externally or internally to affect the low back. It may decreased the functions of low back due to increased the pain stimuli over low back. The Back Pain Functional Scale (BPFS) is a subjective scale used to measure the patient's physical function after low back pain. Score 0 is low function 60 is normal function of back. This scale was developed by Stratford et al. (2000) . To find out effectiveness of giving zygapophyseal manipulation with IFT to improve functions of back for a period of 5 days.

METHODOLOGY:
A total number of fifteen subjects were selected in Physiotherapy Department of Swamy Vivekanandha Physiotherapy College, Namakkal by purposive sampling method by who fulfilled the inclusion criteria. The study was pretest and
post-test for a single group experimental study in nature. The treatment was conducted for a period of 5 days. The subject was selected by using purposive sampling method. pretest taken using BPFS score assigned to zygapophyseal manipulation with IFT. The Inclusion Criteria are patients Age between 45 – 55 years patients have selected in this study, Suffering from mechanical LBP, the subjects were selected 35 - 45 score in BPFS. The Exclusion Criteria are the score below 35 & above 45 in BPFS, Uncooperative patients and other Pathological or associated problems of Cardio-Neuro-Musclo-Skeletal issues in low back. Before the patient treatment all the subjects were explained about the study and the procedure to be applied. They were asked to inform if they any discomfort during the course of study. Written consent was obtained from all the subjects.

**PROCEDURE:**
The person was made to relax sitting on treatment table for taking assessment. Before starting the treatment protocol, We collect BPFS score from all subjects. The BPFS score should be 35 - 45. The same protocol for all 15 patients in all 5 days. After five days of protocol we were collected BPFS score again from all 15 patients.

**Protocol:**
All subjects should be checked vital signs before starting program in all 5 days. Only stable persons should involve in to our study. We must check the precautions of Patient, Treatment table and IFT apparatus always.

**Zygapophyseal Manipulation:**
Patients Position: Relaxed Prone Lying, Both hand place forward & below the forehead proper billow position
Command: Get relax, Take normal breath
Therapist Position: Walk standing or Comfortable Position
Total Timing: 5 minutes (For a session)
Sessions: 2 time (Morning -1, Evening -1)
Maitland: Grade 5
Method: We should palpate to find out both side Inter-vertebral joints in lumbar region for application. Therapist should make DIP joints, PIP joints flexion, MCP joints extension with abduction of Right hand index finger and middle finger to give mailtand grade 5 force on each every Inter-vertebral joints in lumbar region.

**IFT:**
Patients Position: Relaxed Prone Lying, Both hand place forward & below the forehead with proper billow position
Command: Get relax, Take normal breath
Therapist Position: Walk standing or Comfortable Position
Total Timing: 10 minutes (For a session)
Sessions: 2 time (Morning -1, Evening -1)

**DATA ANALYSIS**

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**Back Pain Function Scale (BPFS) Score:**
The pretest and post test mean values of BPFC score was analyzed using the paired ‘t’ test. For 14 degrees of freedom and 5% level of significance, the table ‘t’ value is 1.729 and calculated ‘t’ value 39.5. Since the calculated ‘t’ value was greater than table ‘t’ value null hypothesis is rejected.

Result:
This study was conducted on 15 subjects. To find out the functions of back was used BPFS score. BPFS score used was short version. The pretest and post test mean values of BPFS score was analyzed using the paired ‘t’ test. Since the calculated ‘t’ value was greater than table t value null hypothesis is rejected. The overall result of this study is zygapophyseal manipulation with IFT to improve functions of back for a period of 5 days.

Discussion:
All subjects are selected from Physiotherapy Department of Swamy Vivekanandha Physiotherapy College, Namakkal. The Outcome measures included the BPFS score to treatment (pretest) and at the end of 5 days of treatment (post test). In this study aim was to find out the effectiveness of giving Zygaphophyseal manipulation with IFT to improve functions of back. The overall effectiveness on BPFS score was analyzed by paired ‘t’ test after 5 days treatment which shows p < 0.05 which is significant. From this study it can be concluded after the Zygaphophyseal manipulation with IFT to improve functions of back followed by 5 days in Mechanical Low Back Pain patients.

Conclusion:
The aim of study is found out the effectiveness of giving zygapophyseal manipulation with IFT to improve functions of back in Mechanical Back Pain patients. 25 patients were selected and assessed. Those who had BPFS score between 35 - 45. Out of 20 members 15 subjects were selected. They received the same protocol.

The BPFS score was measured before and after treatment session (5 Days). Pretest and post test values of the study was collected and assessed for significant difference and their results were analyzed by using paired ‘t’ test. This study concluded that Zygaphophyseal manipulation with IFT to improve functions of back in Mechanical Low Back Pain patients.

BIBLIOGRAPHY: