

Original article:

Comparative study between immediate effect of cupping therapy and myofascial release on lumbar forward flexion

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Abstract

Objective: Cupping therapy and Myofascial release technique both helps in improving range of motion. Range of movement occurs in the different areas of the body including the spine and extremities. The purpose of this study was to compare immediate effect of Cupping therapy and Myofascial release on lumbar forward flexion.

Methodology: We included 30 college students age group between 18 to 25 and conducted pre and post measurements to evaluate the comparison between cupping therapy and myofascial release on lumbar forward flexion.

Results: Cupping treatment is more effective in improving the ROM of the lumbar forward flexion compared to the Myofascial release. In the future, cupping treatment may be considered as one of the treatment options for managing ROM.

Conclusion: Cupping therapy is more effective in improving range of motion of the lumbar forward flexion than the myofascial release technique. In future, cupping treatment will be one of the treatment options for improving range of motion of the lumbar forward flexion.

Keywords: Cupping therapy, myofascial release, range of motion, lumbar forward flexion

Introduction

Cupping therapy and Myofascial release technique both helps in improving range of motion. Range of movement occurs in the different areas of the body including the spine and extremities. ROM refers to the amount of movement that a particular joint can move and measured in degrees. ROM can be reduce due to any injuries to muscle, ligaments or bone. ROM may also be reduced because of problem within the joint, tightness or stiffness of the muscles or pain. The lumbar spine, commonly known as the lower back and are built for weight bearing and stability.[1] The four movements in the spine are flexion, extension, rotation and lateral flexion. Lumbar forward flexion can be measured with modified modified Schober test. Modified Modified Schober Test is a modification of Modified Schober Test by Van Adrichen and Van der Korst. It uses two marks one over the spine connecting two PSIS and other over 15 cm superior to first mark.[2] Normal range of Lumbar forward flexion: 40-60 degrees of movement.

Cupping Therapy is an ancient method and currently used in the treatment of a broad area of medical conditions. In this cups are placed on the skin to create suction and the suction may promote healing with increase in blood circulation to the area where the cups are placed.[3] This may decrease muscle tension and promote cell repair. It may also help form new connective tissues and new blood vessels in the tissue. There are two types of cupping : 1- Dry Cupping: It involves only suction method

2- Wet Cupping: it involves both suctioning and puncturing of the skin (puncturing is done before the suctioning). [4]

Myofascial Release is a safe and very impressive hands-on technique. Myofascial release (MFR) is a form of

manual therapy that involves the application of a gentle sustained pressure onto the skin and low load, long duration stretch to the myofascial complex, which helps in decreasing pain and improve function.[5] MFR is a technique which is useful in physical therapy for relieving muscle stiffness, reducing pain, and improving range of motion and also focuses on releasing muscular shortness and tightness. MFR technique can be done in many conditions and symptoms. MFR technique can be done in many conditions and symptoms. Patient symptoms usually include:

- * Tightness of the tissues that restricts range of motion or pulls the body out of alignment.
- * An extra pressure on muscles or joints that produces pain.
- * Pain in any part of the body, including headache, back pain, neck pain etc
- * Trigger points. [6]

AIM of the study

The aim of this study is to find the immediate effect of cupping therapy and myofascial release on Lumbar forward flexion.

Objectives of the study:

To find the immediate effect of cupping therapy on lumbar forward flexion. To find the immediate effect of Myofascial release on lumbar forward flexion.

To compare the immediate effect of cupping therapy and Myofascial release on lumbar forward flexion.

Material and method

Study design: A comparative study design was used for the present study.

Sample size: The sample size would consist of 30 subjects.

Study centre and location: Manav Rachna International Institute of Research and Studies (MRIIRS), G D Goenka and DU.

Sampling: The subjects were selected through Convenient sampling.

Inclusion criteria:

- College going students.
- Both males and females.
- Age group between 18years to 25years.
- Subjects with normal Body Mass Index (BMI) between 18.5kg/m² -24.9 kg/m²
- Subjects with restricted forward bending of lumbar.

Exclusion criteria:

- Gym going students.
- Any history of previous spinal surgery.
- Over weight or Obesity.
- Under weight.
- Subjects with any spinal injuries.

PROCEDURE:

The duration of the study is one time. The subjects included in this study were 30 college going students age group between 18-25. The subjects who participated in the experiment were selected as those who voluntarily agreed to the experiment and those who had no open wounds at the sites where the treatment was applied. The detail procedure was explained to the subjects and before the treatment plan, the consent form was signed by the subjects. In pre-assessment, each subject's range of motion was assessed by Modified-Modified schober's method.

Individuals with decreased or hampered lumbar flexion were given cupping therapy or myofacial release. After the

treatment post-assessment was done using same method i.e, Modified-Modified schober method to compare the degree of lumbar flexion before and after the treatment. After the treatment cold pack was given for 6-7 minutes. Subject was assigned in either of the treatment groups according to the convenience.

Intervention:

After the pre-assessment of range of motion, each subject was assigned to two groups i.e, cupping therapy as group A and Myofascial release as group B. In cupping therapy patient position was in prone lying on couch and his arm on his side or hanging over the side of the couch according to the patient's comfort and head turned comfortably to one side and same in myofascial release.

Cupping therapy

1. The cupping therapy was performed with therapist on the side of the subject. The cupping technique was performed on subject's lower back. The size of the cup was selected according to the application area of the subject. Before starting the treatment, pour oil onto the skin. After applying cups to the site, air was taken out to create a vacuum state. Dynamic cupping technique was performed in the study. The application time of the cupping was 7 minutes. After the treatment, cold pack was given for 6-7 minutes.

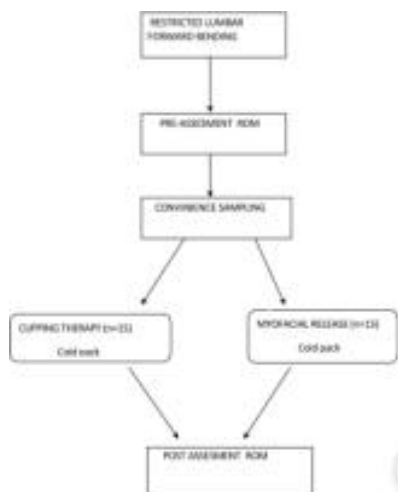
Myofascial release

The Myofascial release was performed with therapist on the side of the subject. The Myofascial release technique was performed on subject's lower back. In MFR, stroking technique was used and a gentle sustained pressure is applied to the area using base of the thumb. Before starting the treatment, pour oil onto the skin. The hands are passed rhythmically and continuously over the subject's skin. The duration of the treatment was 7 minutes. After the treatment, cold pack was given for 6-7 minutes.

Measurement-

Modified modified Schober method was used to measure range of motion of the lumbar forward flexion. In this method 2 landmarks were made. First marks was made at the midline of spine in line with PSIS and second marks as made at the 15 cm above base line mark. Subject was then asked to bend forward as if attempting to touch his/her toes and distance between two marks was remeasured with subject fully flexed with the help of inch tape.[7]

Flow diagram of total experimental procedure:



Results

Comparison between cupping therapy and myofascial release on lumbar forward flexion is shown below through its mean values as shown in Table.

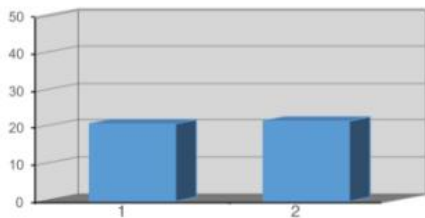
Table 1

	Myofascial release group PRE (N=15)	Myofascial release POST
ROM	21.10	21.71

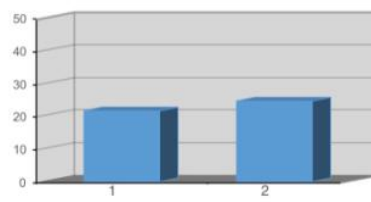
Table 2

	Cupping therapy group PRE (N=15)	Cupping therapy POST
ROM	21.82	24.68

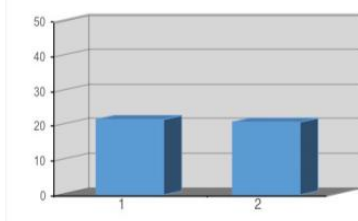
MFR pre and post



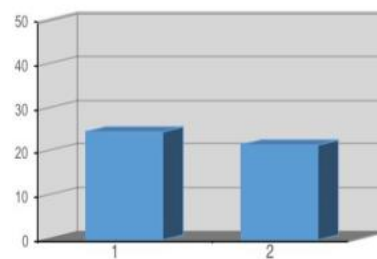
cupping pre and post



Cupping pre and MFR pre



Cupping post and MFR post



Discussion

The present study was done to show the comparison of the effect of cupping therapy and myofascial release on lumbar forward flexion. This is in order to know the best treatment option for increasing ROM and to collect reference data.

In this study, mean value of myofascial release group before the treatment was 21.10 and after the treatment was 21.71 and in cupping therapy group, mean value before the treatment was 21.82 and after the treatment was 24.68. The study results showed that there was increase in ROM in both the groups but cupping therapy was more effective in improving range of motion of the lumbar forward flexion compared to myofascial release.

Based on prior studies, there was a statistically significant increase in ROM in a comparison of a cupping therapy intervention group and a MFR group. This study also found the same result as the preceding study, which implies that cupping therapy has a positive impact on an increase in the result of cupping therapy technique induce free movement of deep fascia and muscles by activating lubrication of fascia that may be superficial fascia and deep fascia. This relieve the restriction end up by adhesion of the deep fascia and permits independent movement of muscle by the good application of cupping therapy. In addition, negative pressure caused by the application of a cup in cupping therapy is about 4 inches removed from soft tissues and applies various mechanical effects which include the relief of muscular pain, tightness of the muscle, release of tissues bound up within muscle, etc. [8]

In this study, data analysis found that ROM of the lumbar forward flexion in the cupping group increased significantly, which may be attributed to the mechanical effects of the cupping. The suction and negative pressure provided by the cups in the therapy helps in loosen the muscles and there is no negative pressure in Myofascial release. In the future, cupping treatment may be considered as one of the treatment options for managing ROM.

Further scope of the study:

- * Study the above comparison by adding more subjects.
- * This study can also be done to improve other joints rom.
- * To further compare effect of cupping therapy and Myofascial release on any type of pain.
- * Study the above comparison in varying age category.
- * This study can also be done on gym going people as their muscles are tight as compared to others.
- * Measurement can be done using goniometer and inclinometer also.
- * To further compare any technique with either of the cupping therapy or Myofascial release.

Limitation of the study:

There are few limitations of this study

- * Sample size included was small.
- * Female to male ratio was more.
- * The age group taken was 18-25 only

Conclusion

The study compared the immediate effect of cupping therapy and myofascial release on lumbar forward flexion and the effect. Cupping treatment is more effective in improving the ROM of the lumbar forward flexion compared to the Myofascial release. In the future, cupping treatment may be considered as one of the treatment options for managing ROM.

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For any images presented appropriate consent has been obtained from the subjects: NA

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