

SYMPTOMATIC MANAGEMENT IN THE REVERSAL OF CERVICAL LORDOSIS AND SACRALIZATION OF LUMBAR VERTEBRAE WITH CUPPING THERAPY: A CASE REPORT

***Vd. Monika Sharma**

P.G. Scholar, Shalyatantra Dept, R.A.Podar College (Ayu.), Worli, Mumbai-18.

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***Corresponding Author**

Vd. Monika Sharma

Vd. Monika S. Sharma, P.G.
Scholar, Shalyatantra Dept,
R.A.Podar College (Ayu.),
Worli, Mumbai-18.

ABSTRACT

Healthy cervical spine resembles a wide 'C' shaped curvature with the curve pointing towards the back of neck. This cervical curve aids in the stabilization of both head and spine. But in some cases, this curve runs in the wrong direction called as Reverse Cervical lordosis, wherein there is an abnormal straightening, curving up or bow in the opposite direction. When the spine curves abnormally, the muscles get pulled in different directions, causing them to tighten up or spasm. The pain extends to the neck, shoulders and upper back. There is neck stiffness, headache, decreased range of motion, pins and needle sensation in the hands and fingers. On the other hand, Sacralization is a common irregularity of spine where the L5 vertebrae may fuse fully or partially

on either side or both sides of sacrum. It is a congenital anomaly. A young male patient aged 30 years visited Shalya OPD with chief complaints of chronic neck pain and stiffness for 2 years. The pain radiates to Rt upper limb and there was decreased and painful cervical range of motion and strength. A considerable lower backache and morning stiffness was also there. MRI Cervical spine with whole spine screening reveals reversal of cervical lordosis, C4,C5,C6,C7 levels with mild disc bulge and uncovertebral osteophyte indenting the traversing nerve roots at these levels. There is sacralization of L5 vertebrae and at L3,L4,L5 levels, partial disc desiccation with mild diffuse disc bulges. An intervention to manage this case successfully, improve the functional ability of spine and provide symptomatic relief in neck and back pain is CUPPING THERAPY. A Healthy cervical spine is important for much of our movement and flexibility. This therapy exhibits mechanical, physiological and psychological effects on the body, decreases the fascial & muscular spasm and tensions, increases blood flow, releases the rigid soft tissues and promotes cellular healing. The

patient's overall health and comfort levels is enhanced tremendously. It provided deep relaxation to the patient which aided in decreasing his mental stress. Main goal is to increase the upper extremity and neck strength, flexibility as well as range of motion so that he could be active and pain free.

KEYWORDS: Cupping, Cervical and Lumbar Spine, Musculoskeletal Pain, Raktmokashana.

INTRODUCTION

The Cervical spine is made of seven cervical vertebrae that spans the base of skull to our thoracic spine. Healthy cervical spine resembles a wide 'C' shaped curvature with the curve pointing towards the back of neck. This cervical curve aids in the stabilization of both head and spine. But in some cases, this curve runs in the wrong direction called as Reverse Cervical lordosis, wherein there is an abnormal straightening, curving up or bow in the opposite direction. The causes may be congenital, traumatic injury causing vertebral fracture, post-surgical, obesity, osteoporosis, neuromuscular causes and uneven posture. When the spine curves abnormally, the muscles get pulled in different directions, causing them to tighten up or spasm. The pain extends to the neck, shoulders and upper back. There is neck stiffness, headache, decreased range of motion, pins and needle sensation in the hands and fingers.

Sacralization is a common irregularity of spine where the L5 vertebrae may fuse fully or partially on either side or both sides of sacrum. It is a congenital anomaly.

A Healthy Spine is very much required for body's movement and flexibility. The Standard first line therapy for musculoskeletal pain can be largely divided into pharmacological and non pharmacological therapies. Use of acetaminophen and NSAIDs are known to increase risk of reduced liver function, liver failure and haemorrhagic gastritis. To avoid the life threatening side effects, a holistic approach is made by making the use of a complementary therapy-CUPPING. Broadly there are 2 types of Cupping-Dry and Wet. Dry Cupping is a technique in which cups are applied to the skin to create a vacuum for suction without drawing blood, whereas, in Wet Cupping, small incisions are made on the skin to promote bleeding and then suctioned cups are placed over the bleeding sites.

In case of Surgical disorders, para surgical methods i.e. Agnikarma & Raktamokshana are very beneficial. Raktamokshana is accepted as a half of the therapeutic measure in Shalya

tantra like Basti is in Kayachikitsa.^[1] In the present case of Reverse Cervical lordosis and sacralization of L5 vertebrae, the chief complaint is Pain that hastens the lifestyle of the patient and leads to functional disability and poor quality of life. Shringa gata rakta visravana technique, that is, Wet Cupping is used to symptomatically manage this Vata predominant ailment.

CASE REPORT

A young male patient aged 30 years visited Shalya OPD with chief complaints of chronic neck pain and stiffness for 2 years. The pain radiates to Rt upper limb and there was decreased and painful cervical range of motion and strength. A considerable lower back ache and morning stiffness was also there.

The MRI Cervical spine with whole spine screening reveals reversal of cervical lordosis, C4,C5,C6,C7 levels with mild disc bulge and uncovertebral osteophyte indenting the traversing nerve roots at these levels. There is sacralization of L5 vertebrae and at L3,L4,L5 levels, partial disc desiccation with mild diffuse disc bulges. History revealed that patient is non-hypertensive, non-diabetic and no other major surgical or medical illness. Patient reported history of taking NSAIDs which gave him temporary pain relief.

TREATMENT

Cupping therapy once a week – a total of 5 sittings in one & a half month.

THE CRITERIA FOR ASSESSMENT

1. Pain

Pain rating is started from the zero day when he arrived to the OPD for treatment purpose. Total 5 sittings were given of Cupping therapy and on every visit, that is once a week, the patient was asked to give the Pain rating using the Numerical rating score scale.

1	2	3	4	5	6	7	8	9	10
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2. Cervical Range of motion (FLEXION & EXTENSION)

Analysed in degrees before the start of Treatment and after the end of 5 Cupping Sessions.

3. Self rated Functional Improvement. On the basis of Numerical Scoring i. Poor-1-3

ii. Moderate-4-6 iii. Good-7-9 iv. Excellent-10

PROCEDURE OF WET CUPPING

1. Puravakaram

- (i) Written informed consent was taken from the patient briefing him the entire procedure and the duration of therapy.
- (ii) The required materials that are modified Shringa Yantra(CUPS), 11 no. Surgical blade, kidney tray, gauze, Yashtimadhu taila, drapes were kept ready.
- (iii) Temperature, Pulse, Respiration and Blood pressure was noted prior to the procedure everytime.



Figure 1: Modified Shringa Yantra.

2. PRADHANAKARMA

- i. Patient was given prone position, the cervical region and lower back was cleaned with betadine solution.
- ii. Modified Shringa Yantra(CUPS) was applied in the neck and lower back to demarcate the sites. The suction was well created and maintained there for atleast 10 minutes.
- iii. After 10 minutes, all the cups were removed.
- iv. Using 11 no. Surgical blade, multiple minute incisions were made in the demarcated sites. This pricking caused the oozing of blood.
- v. Again Cups were applied after pricking, for complete oozing of blood in the respective cups at neck and lower back.
- vi. Proper Observation of the whole process was made till the impure blood got collected and filled the Cups.

vii. Then all Cups were removed when the blood stopped oozing and clots were formed.



Figure 2: Applied Cups for demarcation in Cervical region.



Figure 3: Applied Cups for demarcation in Cervical and Lumbar region with good Suction.



Figure 4: Making small multiple Incisions over demarcated site.

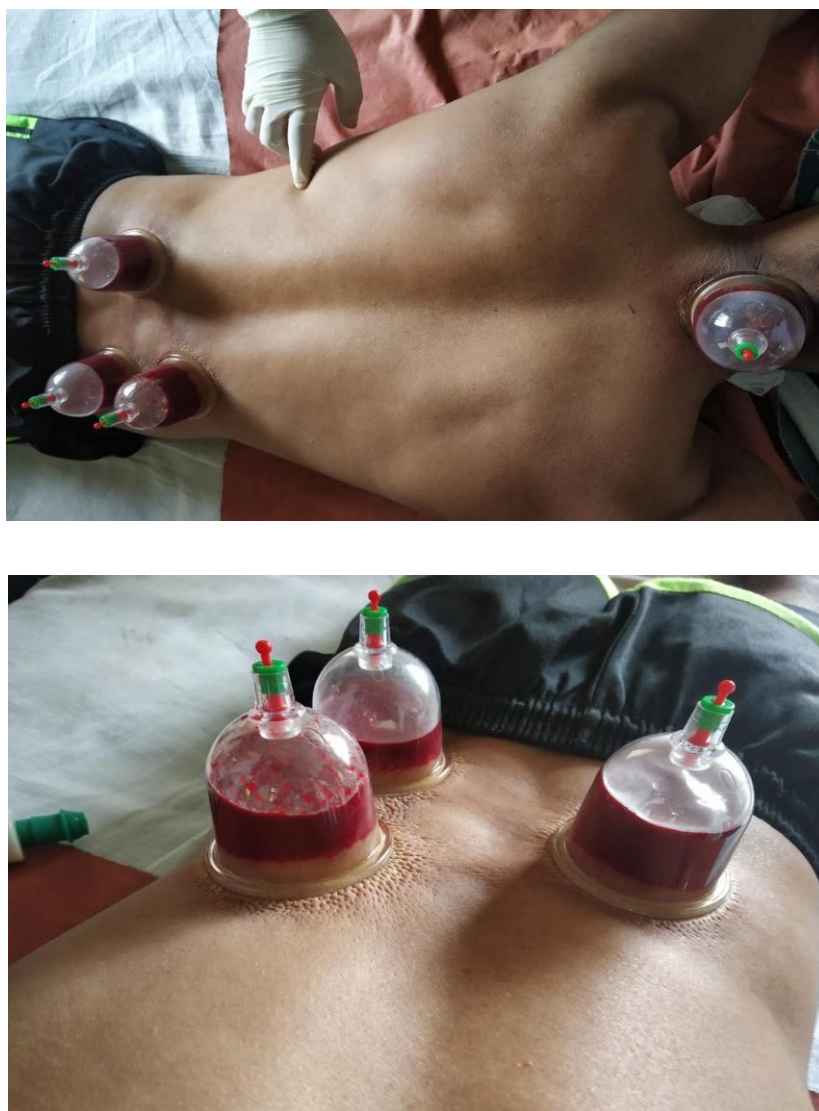


Figure 5: Proper bleeding and collection of blood in Cups.

3. PASCHATA KARMA

- (i) The impure blood and clots were wiped off with Sterile Guaze piece.
- (ii) *Yashtimadhu taila* soaked guaze pieces were applied over each incised circular areas after the Cupping procedure.
- (iii) Follow up after 15 days.
- (iv) DOs: Patient was advised to take a light diet and do light work.
- (v) DONTs: Not sitting in air conditioned room, avoid swimming and heavy exercises.



Figure 6: Application of *Yashtimadhu Taila* Soaked Gauze pieces over treated sites.



Figure 7: The healing incised sites over lumbar region after Cupping Session.

OBSERVATION AND RESULT

The following factors were analysed

1. PAIN (Neck and Back Pain)

No. of Sitting	Numerical Score Rating
First day of OPD	10
1 ST Sitting	7
2 ND Sitting	5
3 RD Sitting	3
4 TH Sitting	2
5 TH Sitting	1

2. Cervical Range of Motion

Range of Motion	Before Cupping(Degrees)	After Cupping(Degrees)
Cervical Flexion	30	60
Cervical Extension	50	70

3. Self Rated Functional Ability

Before Treatment	After Treatment
1(poor)	8(good)

DISCUSSION

Cupping Therapy is a haemodynamic mechanism facilitating the muscle function, as demonstrated by the reduction of Deoxy haemoglobin and elevated Oxy haemoglobin levels in muscle areas treated with cupping.^[2] It involves a mechanism for removing the oxidative stress^[3] and produces therapeutic effects through diffuse noxious Inhibitory control^[4], which contributes to alleviation of Pain. It works on a pretty simple mechanical action of creating a Vacuum on the skin which draws the soft tissues / muscles up into the cup. The process of drawing the soft tissue (muscle, skin, connective tissue, fascia) effectively stretches and lengthens the muscle fibres. This micro stretching allows the area to lengthen back to its Normal Resting stage and thus restores normal length to the tissue. This therapy exhibits mechanical, physiological and psychological effects on the body, decreases the fascial & muscular spasm and tensions, increases blood flow, releases the rigid soft tissues and promotes cellular healing.

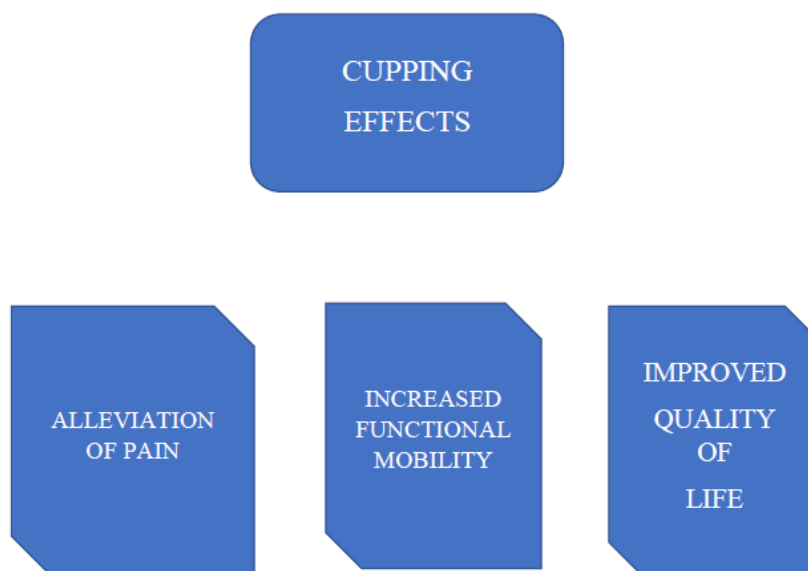


Figure 8: The substantial positive effects of Cupping Therapy in Present Case Study.

As per Ayurveda

In *pitta*, *rakta* and *kaphaja* vyadhis or when *pitta* or *kapha* is in *anubandha* to *vata* dosha, *Raktamokshana* is predominantly indicated.^[5] In such conditions of *Vata prakopa* due to *kapha* and *pitta avarana*, *Raktamokshana* helps to remove the *Avarana* of *pitta* and *kapha*

dosha bringing the *anuloma gati* of vitiated *Vata* that indirectly cures the *Vatika* symptoms along with symptoms produced by *Kapha dosha*. *Raktmokshana* by *Shringa Avcharana* is also indicated in *Vata dushit Rakta vyadhis* in *Sushruta Samhita*.^[6]

CONCLUSION

In conclusion, this patient demonstrated improved functional abilities, the cervical range of movements were now comfortable without any pain, he could now perform his daily activities without much discomfort. The patient's overall health and comfort levels is enhanced tremendously. It provided deep relaxation to the patient which aided in decreasing his mental stress. This intervention proves to be a non-invasive, simple, cost effective and safe treatment modality for the symptomatic management in patients with chronic neck and back pain. However, more research is required in this topic in order to provide valid evidence for this intervention's benefits to general population.

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