



Case Study

THE EFFICACY OF WETCUPPING IN KATEEGRAHA (LOW BACK PAIN)

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ABSTRACT

Among musculoskeletal disorders, low back pain (LBP) has the highest prevalence worldwide and is the primary cause of disability. This is the condition that has the highest potential for rehabilitation benefits. Chronic LBP is a major cause of work loss and participation restriction and reduced quality of life around the world. In Ayurveda low back pain is correlated with *Kateegraha*. *Shringa avcharana* is one of the methods of *Raktamokshana* and this can be correlated with Chinese cupping method. The suction through specific cupped instrument was used since prehistoric time for the treatment of disease. **Objective:** This case series aims to show how wet cupping affects lower back pain (*Kateegraha*). **Intervention:** five patients who complained of low back pain were included to receive four sittings of wet cupping. Cups were applied on the lumbosacral region once every 7 days for 21 days. The visual analogue scale (VAS) and The Quebec Back Pain Disability Scale was used to evaluate the pain on 7 days, 14 days, and 21 days. **Conclusion:** It's been demonstrated that wet cupping works well for relieving *Kateegraha* (low back pain). So, we can conclude that for individuals with low back pain, wet cupping is a successful, safe, practical, and reasonably priced treatment plan.

INTRODUCTION

Worldwide, low back pain (LBP) is the most prevalent musculoskeletal issue^[1]. Population prevalence, low back pain affects 60-80% adults. Women experience a higher overall prevalence of lower back pain than men do^[2,3]. In the United States, back pain ranks fifth in terms of hospital admissions, second most common reason for family doctor visits, the most common reason for activity limitation in those under 45, and the third most common reason for surgical operations. Currently, the most common ways to treat lower back pain are conservative measures including analgesics, physiotherapy, muscle relaxants, and narcotics; very few cases call for surgery, which might be costly or have drawbacks.

Vatavyadhis are a class of disorders characterized by *Hetu*, *Sthana*, and *Lakshana*; they manifest as *Dhatu Kshaya* or *Margavarana*^[4]. *Dhatu Kshaya Janya Vatavyadhis* takes into consideration a

variety of degenerative disorders. A prevalent issue affecting the population is *Katigraha*. Age, trauma, a sedentary lifestyle, and inactivity are all possible causes of this illness^[5]. One more causal component is stress at work. In Ayurveda Low back pain is correlated with *Kateegraha*. *Shoola* denotes discomfort, and *Kati* denotes the low back. With the exception of *Gadanigraha Vata Vyadhi Adhikari*, Acharyas have not specifically referenced *Katigraha*^[6]. The illness is always classified under *Vata vyadhi*. It affects the body because it vitiates both the *Kapha* and *Vata Doshas*. Among the clinical characteristics are *Ruk* (pain), *Toda* (pin-like sensation), *Stambha* (stiffness), *Muhuspandana* (twitching and cramping) in the *Sphik* (buttock), *Kati* (waist), *Uru* (thigh), *Janu* (knee), *Jangha* (calves) and *Pada* (foot)^[7]. In *Gadanigraha* clearly states that the pain is produced due to stiffness, which is produced by *Sama* or *Nirama*, *Vayu* movement into *Kati* region. Hence this suggests of presence of *Dosha* involvement. The Ayurvedic treatment consists of *Shodhana Shamana* and *Rasayana* therapies. *Raktamokshana* is accepted as half of the therapeutic measure in *Shalya Tantra* like *Basti* in *Kayachikitsa*. Letting out the impure blood from the body is known as *Raktamokshana*^[8]. *Alabu* is a type of *Raktamokshana*^[9]. Cupping therapy can be considered

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as modified form of *Alabu*. Cupping therapy as a therapeutic method involving the application of suction by creating a vacuum. Cupping therapy belongs to traditional Chinese medicine and in Islamic medicine therapeutic cupping is called *Hijama*. The suction through specific cupped instrument was used since prehistoric time for the treatment of disease^[10-12]. There are two types of cupping therapy which are dry and wet cupping. In dry cupping, the suctioning cups simply pulls the local skin to create vacuum into the cup and in wet cupping same technique was used but the difference is that pricking on skin so that blood is drawn into cups. Here in this clinical study wet cupping was performed. Primary mechanism of cupping therapy includes negative pressure, vasodilation and enhanced fluid exchange, which helps to reduce pain. To relieve pain and stiffness of low back, wet cupping method are used.

Case Description

Case 1

This patient was a 44 year old male patient working in IT profession, who attended the Outpatient Department of the Government Ayurveda College Panchakarma Hospital, Poojappura, on 23/06/2023 with complaints of pain in low back for 5 months. He had no history of trauma, diabetes mellitus or hypertension. The investigations of the patient before starting the treatment are shown in table no 1.

Case 2

On March 30, 2023 72 year old male patient working as driver, who attended the outpatient department of the Government Ayurveda College Panchakarma Hospital, Poojappura, on 01/08/2023

with complaints of severe pain in low back for 2 years. He had history of diabetes mellitus and hypertension. X-ray of lumbosacral spine was normal. The investigations of the patient before starting the treatment are shown in table no 1.

Case 3

This patient was a 28 year old male patient working as gym trainer who attended the outpatient department of the Government Ayurveda College Panchakarma Hospital, Poojappura, on 20/03/2023 with complaints of pain in low back for 6 month. He had no history of trauma, diabetes mellitus or hypertension. X-ray of lumbosacral spine was normal. The investigations of the patient before starting the treatment are shown in table no 1.

Case 4

This patient was a 38 year old female patient working in IT profession, who attended the outpatient department of the Government Ayurveda College Panchakarma Hospital, Poojappura, on 03/10/2023 with complaints of pain in low back since 1 year. He had history of trauma, X-ray of lumbosacral spine was normal. The investigations of the patient before starting the treatment are shown in table no 1.

Case 5

This patient was a 25 year old male patient working as a weight lifter, who attended the outpatient department of the Government Ayurveda College Panchakarma Hospital, Poojappura, on 23/12/2023 with complaints of severe pain in low back for 5 month. He had no history of trauma, diabetes mellitus or hypertension. The investigations of the patient before starting the treatment are shown in table no 1.

Table 1: Laboratory investigations

Investigation	Case 1	Case 2	Case 3	Case 4	Case 5
Hb	13	14.5	13.5	14	16
BT	3	3.50	4	3.40	4
CT	6	7	6	6.20	7
HIV	Non reactive	Non reactive	Non reactive	Non reactive	Non reactive
HBsAg	Negative	Negative	Negative	Negative	Negative

Procedure of Wet Cupping

Purvakarma

1. Written inform consent of the patient was taken having the information regarding the procedure to the patient and relatives.
2. The required materials that are modified *Shringa Yantra* (cups), disposable sterile needle no. 24G, kidney tray were kept ready
3. Temperature, pulse, respiration and blood pressure was noted prior to procedure.
4. *Yusha* was advised to patient one hour before procedure.

5. Local *Snehana* and *Swedana* was done on the lower back

Pradhana karma

1. Patient was given prone position, then lower back region was painted with betadine solution.
2. Draping was done with sterile cut sheet. Cups, four cups was applied on lower back region.
3. After ten minute all cups will be removed.
4. Pricking of skin was done with help of disposable needle in demarcated area.
5. Again cups were applied after pricking for complete oozing.

6. The observations were done for proper oozing of blood in the respective cups at lower back.
7. once the blood had coagulated, the cups was taken out, impure blood was wiped off with sterile gauze piece, bandaged with antiseptic solution

After the procedure patients were asked to rest for at least 10 minutes

Assessment

The pain was assessed on the 0th day, 14th day & 21st day, the basis of visual analogue scale^[13] and The Quebec Back Pain Disability Scale^[1]



VAS	Case 1	Case 2	Case 3	Case 4	Case 5
0 th day	8	9	7	9	8
7 th day	6	6	5	8	5
14 th day	4	4	4	5	4
21 th day	3	3	3	3	2

The Quebec Back Pain Disability Scale

	Case 1		Case 2		Case 3		Case 4		Case 5	
	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
Get out of bed	4	3	3	2	4	2	5	3	4	3
Sleep through the night	3	2	3	2	3	3	4	3	5	3
Turnover in bed	3	2	3	2	3	2	5	4	4	3
Ride in a car	4	2	4	3	3	2	4	4	4	3
Sit in a chair for several hours	4	2	4	3	3	2	4	4	4	4
Climb one flight of stairs	3	2	3	2	3	2	4	3	4	2
Walk a few blocks (300-400m)	3	3	2	1	3	2	3	2	3	2
Walk several kilometres	4	3	4	3	4	3	4	3	5	4
Reach up to high shelves	3	2	4	3	3	2	3	2	4	3
Throw a ball	4	3	4	3	3	2	4	3	4	3
Run one block (about 100m)	3	1	3	2	3	2	3	2	4	3

Take food out of the refrigerator	2	2	2	1	3	2	3	2	3	2
Make your bed	3	2	4	2	3	2	3	2	4	3
Put on socks (panty hose)	4	2	4	3	3	2	4	3	4	3
Bend over to clean the bathtub	4	2	4	3	3	2	4	4	4	4
Move a chair	4	3	3	3	3	2	4	3	4	3
Pull or push heavy doors	4	3	5	3	4	3	4	3	4	3
Carry two bags of groceries	5	4	5	4	4	2	4	4	5	4
Lift and carry a heavy suitcase	5	4	5	5	4	3	4	4	5	4

DISCUSSION

The outcome of this case series shows that wet cupping provides an opportunity to alleviate low back discomfort by assessing VAS and Quebec Back Pain Disability Scale. Five patients with *Kateegraha* were followed up for 21th days in case series. For local application, wet cupping was administered to the patients. In the conventional paradigm, non-steroidal anti-inflammatory drugs, opioids, muscle relaxants, steroids, and surgery can somewhat alleviate symptoms in a few cases but not entirely. Therefore, it is the need of the hour to develop a therapy that can manage pain without any side effects.

Chinese cupping therapy can be equated with the *Shringa*. It works on the principle of vacuum extraction. *Raktmokshana* by *Shringa avcharana* is also indicated in *Vaata dushit raktavyadhis* in *Sushrut Samhita*. *Ushna*, *Madhura* and *Snigdha Gunas* of *Shringa* antagonizes the *Sheeta*, *Katu* and *Ruksha Gunas* of *Vata Dosha* and relieves pain^[15]. Thus, *Raktamokshana* by cupping therapy was chose for treating patient diagnosed as *Katigraha*.

The physiological mechanisms through which wet cupping might function remain uncertain. According to certain theories, various components contribute to the effects of wet cupping, such as neural, haematological & immune system functioning^[16,17].

Wet-cupping may specifically "suppress pain" by influencing three different.

Neurological systems: (a) The "analgesia" system in the brain and spinal cord, which consists of the Raphan nucleus, the Nucleus reticularis paraventricularis, the periaqueductal grey, and periventricular regions (b) the brain's opiate system (endorphins and enkephalins), and (c) most influential, through inhibition of pain transmission by simultaneous tactile sensory signals^[16]. Furthermore, it is possible that diffuse noxious inhibitory controls (DNICs) play a role in the observed pain-relieving effect^[18]. In the neural system, the effect occurs through the regulation of neurotransmitters and hormones like serotonin, dopamine, endorphin, acetylcholine, etc^[19,20]. In the hematological system, the primary effects occur by these two pathways:

1. Regulation of coagulation and anti-coagulation systems like a decrease in the level of a haematological element such as fibrinogen^[21].
2. Reduction in the haematocrit, followed by an increase in blood flow and oxygenation of the end organs. In the immune system, the main effects occur by these three pathways:
 - Irritation of the immune system by producing local simulated inflammation followed by activation of the complementary system and increased level of immune products such as interferon and tumor necrotizing factors.
 - Organize lymph traffic and boost lymph flow through lymph vessels.
 - Effect on thymus.

Wet cupping's precise mode of action requires further clarification. Therefore, analytical research is required to determine its direct impact on lower back pain.

CONCLUSION

Present case series concluded that *Raktmokshana* by cupping therapy is one of the parasurgical options for management of *Kateegraha*. Further studies are needed in more patients for its scientific validation.

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