Clinical efficacy of *Jalaukavacharana* (leech application) in Gluteal Hematoma – A Case Study

**Dr. Sinjid R,**¹ **Dr. Gopikrishna BJ.**²

¹Post Graduate Scholar, ²Professor & HOD, Dept. of Shalya Tantra, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan, Karnataka, INDIA.

**ABSTRACT**

Hematoma is generally defined as a collection of blood outside of blood vessels. Most commonly, hematomas are caused by an injury to the wall of a blood vessel, prompting blood to seep out of the blood vessel into the surrounding tissues. A hematoma can result from an injury to an artery, vein, or small capillary. A patient with 12x12 cm Hematoma of left gluteal region associated with severe pain and local tenderness was taken for *Jalaukavacharana* (leech therapy) as primary line of management.

**Key words:** Gluteal hematoma, *Jalaukavacharana*, Leech therapy.

**INTRODUCTION**

The most common cause of a hematoma is injury or trauma to blood vessels. This can happen as a result of any damage to blood vessels that can disrupt the integrity of the blood vessel wall.[¹] Even minimal damage to a small blood vessel can result in a hematoma. For example Subungual hematoma can simply occur from minor trauma to the nail or from a light stroke against an object.[²]

Hematomas can be seen under the skin or nails as purplish bruises of different sizes. Hematomas can also happen deep inside the body where they may not be visible. Hematomas may sometimes form a mass or lump that can be felt. Sometimes hematomas are named based on their location.

**Address for correspondence:**

Dr. Sinjid R.
Post Graduate Scholar, Dept. of Shalya Tantra,
Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan, Karnataka, India.
E-mail: sinjir@gmail.com

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**CASE STUDY**

**Presenting complaint**

A male patient of 32 years came to our OPD with complaints of severe pain and tenderness of left gluteal region associated with difficulty in sitting since 2 days.
History of present illness

Patient was apparently healthy before 2 days. Then while driving tractor he fell down hitting the left gluteal region. Immediately he developed severe pain, tenderness and reddish discoloration of the area. For the above complaints he took analgesic medications for 2 days, but he didn’t got any relief. So he came to our hospital for further management.

Past History
- No H/O - HTN, DM, 
- H/o Trauma - Fell down hitting the left gluteal region

Personal History
- Appetite - Good
- Sleep - Reduced
- Bowel - Normal
- Micturition - Normal

Habits
- Non smoker
- Non alcoholic

Examinations
- BP - 130/80 mm of Hg on supine position
- Pulse - 78/min regular
- Temp. - 98.6°F

Systemic
- CNS - conscious oriented
- RS - NVBS
- CVS - S1, S2 normal, No added sounds
- P/A - soft & normal

Local examination

Inspection - Gluteal region

Hematoma of left gluteal region 12x12 cm

Palpation

Induration associated with tenderness of left gluteal region

Temperature raised.

Blood investigations
- Hb - 12.8gm/dl
- TLC - 4,800/cumm
- RBC count - 4.43 millions/cmm
- PCV/Hematocrit - 34.7%
- MCV - 79.8fl
- MCHC - 33.6 gm/dl
- MCH - 26.9 picogram
- Platelet Count - 2.91 Lakh/cmm
- Bleeding Time - 02 min 05 sec
- Clotting Time - 05 min 20 sec
- Blood Sugar Random - 98 mg/dl
- HbsAg - Non reactive
- HIV 1 (Antibodies) - Non Reactive
- HIV 2 (Antibodies) - Non Reactive

Methodology

After proper investigation, leech therapy was planned as a first line treatment.

Written consent was taken.

3 leeches were applied over gluteal hematoma for 45 minutes.

Observations
**Observations**

Symptoms were taken into consideration under grading system according to their severity.

<table>
<thead>
<tr>
<th>Variables</th>
<th>BT</th>
<th>Day 1</th>
<th>Day 3</th>
<th>Day 6</th>
<th>Day 9</th>
<th>Day 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Tenderness</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Burning Sensation</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Bleeding</td>
<td>-</td>
<td>-</td>
<td>_</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Local Temp.</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Redness</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Difficulty in sitting</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Size of hematoma</td>
<td>12x12 cm</td>
<td>12x12 cm</td>
<td>8x8 cm</td>
<td>6x5 cm</td>
<td>1x1 cm</td>
<td>-</td>
</tr>
</tbody>
</table>

**Result**

- As soon as the leech application was started, patient got relieved of pain and tenderness.
- His agony and discomfort level was also reduced.
- After second sitting, induration and redness was also reduced.
After Jalaukavacharana, patient was completely relieved and satisfied with the treatment.

**DISCUSSION**

- Due to the qualities of its anticoagulant, vasodilator, thrombolytic, anti-inflammatory substances, leeches has been proved as medically effective.\(^{[3]}\)
- Through their sucking effect, leeches stimulate circulation of cells at risk of necrosis and maintain oxygenation of the tissue.
- They therefore promote restoration of capillary anastomosis.\(^{[4]}\)
- They accelerate the hematoma decongestion process.

**CONCLUSION**

The present study proves the effectiveness of Jalaukavacharana in treatment of Hematoma.

**REFERENCES**


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