



## Review Article

### STANDARDIZING SHIROLEPA: BRIDGING CLASSICAL KNOWLEDGE AND CLINICAL APPLICATION

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#### ABSTRACT

*Shirolepa*, a time-honored Ayurvedic therapeutic modality, involves the application of medicated Ayurvedic drugs paste on the scalp. It is indicated for various disorders including *Shiroroga* (head disorders), *Manasika rogas* (psychological disorders), and skin conditions. Despite its clinical relevance, the absence of standardized protocols has resulted in varied practices, compromising therapeutic consistency and reproducibility. **Objective:** To review classical references of *Shirolepa* and develop a standardized clinical protocol that aligns traditional knowledge with contemporary therapeutic needs. **Materials and Methods:** An extensive literary review was conducted across classical Ayurvedic texts including *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, *Laghutrayi*, *Yogaratanakara* and *Gada nigrha*. Current clinical applications were assessed through practitioner surveys and review of published clinical studies. Comparative analysis was done to identify variations and common practices in indications, formulations, and application methods. **Results:** The study identified significant heterogeneity in current clinical practices. Commonly used formulations, indications, application techniques, and retention times were compiled. A standardized protocol for *Shirolepa* was proposed based on classical references and validated clinical practices. Key components included criteria for patient selection, procedural steps, formulation types, duration, and post-procedure care. **Conclusion:** Standardization of *Shirolepa* is imperative for ensuring therapeutic efficacy, safety, and wider clinical applicability. This work provides a framework that integrates classical Ayurvedic principles with practical clinical implementation, paving the way for consistent practice and future research validation.

#### INTRODUCTION

Being the seat of *Prana* and *Indriyas*, *Shirorogas* hold a prominent place in the *Urdhwajatrugata vikaras*<sup>[1]</sup>. For other body parts, it is *Ashraya (Moola)* and *Sadhyopranahara marma*.<sup>[2]</sup> The official scriptures of Ayurveda have recognized the significance of *Uttamanga* and the diseases that affect it. *Shiras* is the *Sthana* of *Prana*, according to *Charaka* <sup>[3]</sup>. According to *Vagbhata*, *Shiras* is the *Ashraya* of *Pranavayu*, which is in charge of *Bhuddhi* and other *Indriya* duties <sup>[4]</sup>.

The combination of *Agni*, *Soma*, *Vayu*, *Panchaindriyas*, and *Panchamahabhootas* is known as *Sushruta* opines *Prana*. *Shiras* are home to these *Pranas* <sup>[5]</sup>.

देहेप्रलेननाथतथ ल्लेनइत्युच्यतबेध

ललप्यततअनेनइततलेननम।।(Paribhasha Khanda; DG Yadav ji)

*Lepa* is the practice of applying medication to bodily areas. "Vang" *Pratyaya* is attached to the root "Lip" to form the terms *Lepa*. Also known as plastering, smearing, or anointing. *Lepa* is synonymous with *Alepa*, *Lipta*, *Lepa*, *Lepam*, *Anulepana*, and *Kulambu*. तस्यप्रमाणमहर्षादथचमोत्सेधमुनहदशन्तत॥ (Su.Su, 18/11)

Application on the skin is equal to thickness of *Ardra mahishacharma*. Time for application is indicated only in day time. *Shirolepa*, an *Bahirparimarjana chikitsa* as (external therapeutic procedure) mentioned in various classical Ayurvedic texts, involves the topical application of a Ayurvedic

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drug paste on the scalp. It is employed in managing ailments related to the head, such as headache, insomnia, stress, alopecia, and inflammatory scalp conditions. Despite its therapeutic significance, there exists no universally accepted method of application, leading to considerable variability in practice. This lack of uniformity affects treatment efficacy, impedes scientific validation, and limits global acceptance.

This paper aims to bridge this gap by critically analyzing classical references and current clinical trends to propose a standardized *Shirolepa* protocol.

This effort contributes to the ongoing movement in Ayurveda towards procedure standardization and integration into mainstream healthcare. *Shirolepa* is extensively described in *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, and later compilations like *Bhavaprakasha* and *Yogaratanakara*. Key aspects include

### Methodology

**Textual Analysis:** A comparative review of *Bruhatrayi* and *Laghutrayi* texts was conducted to extract and tabulate classical references.

**Table 1: Classical references of *Shirolepa* in various Diseases**

<b>A) Charak Samhita</b>			
<b>S.No</b>	<b>Diseases</b>	<b>Ingredients</b>	<b>References</b>
1.	<i>Shiroroga</i>	Milk, Chandan, Ushira, Yashtimadhu, Nalavyagar, Nakh, Utpala	<i>Cha, Chikitsa 26/177</i>
2.	<i>Palitya</i>	Krishna tila, Amalki, Kamal keshar, Yashtimadhu, Honey	<i>Cha, chikitsa 26/279</i>
3.	<i>Palitya</i>	Saindhav, Shukal, Amal, Tandula, Loha choorna,	<i>Cha, chikitsa 26/280-281</i>
4.	<i>Shiro-shoola</i>	Tagar, Utpala, Chandan, Kushta, Ghee	<i>Cha, Su 3/23</i>
5.	<i>Shiro-shoola</i>	<b>Prapaundarikadi lepa</b> – Prapaundarik, Devdaru, Kushta, Yashtimadhu, Ela, Kamal-Utpala, Agar, Eraka, Padma-Kastha, Choorak, Ghee	<i>Cha, Su 3/224</i>
6.	<i>Shiro-Shoola</i>	Shatpushpa, Yashtimadhu, Kushta, Tagar, Chandan, Ghee	<i>Cha, Chikitsa 8/77</i>
7.	<i>Shiro-shoola (Dvanda Dosha)</i>	1.Bala, Rasna, Tila, Ghee, Yashtimadhu, Neelo-Utpala 2.Gugglu, Devadaru, Chandan, Nagakai-Kesar, Ghee 3.Kakoli, Bala, Vidari-kanda, Krishna-Kanda, Punarnava 4.Shatavari, Ksheer-Kakoli, Gandatrana, Yashtimadhu	<i>Cha, Chikitsa 8/78-80</i>
<b>B) Sushrut Samhita</b>			
1.	<i>Vata-Shiroroga</i>	<b>Chandanaadi Lepa</b> -Chandan, Utpala, Kushta, Pippali	<i>Su, uttra tantra 26/7</i>
2.	<i>Pitta-shiroroga</i>	<b>1.Madhurakaadi Dravya Lepa</b> -Ghee 2.Nal, Vaitasa, Latkamal, Swetakamal, Swetachanadan, Pad-makha, Vansa, Durva, Yashtimadhu, Musta, kamal, Ghee 3.Ushira, Lamajak, Chandan, Anjana, Moti, Gairika, Water	<i>Su, uttra tantra 26/12-14</i>
3.	<i>Kapha-Shiroroga</i>	Sarla, Kustha, Devdaru, Kshar-odaka, Lavana	<i>Su, uttra tantra 26/22</i>
4.	<i>Suryavarta, Ardhavabhedaka</i>	Sariva, Utpala, Kushta, Yashtimadhu, Kanji, Ghee, Taila	<i>Su, uttra tantra 26/34-35</i>
5.	<i>Sankhaka</i>	1.Shatavari,, Tila, Yashtimadhu, Neelo-utpala, Durva, Punarnava, water 2.Mahasugandha, Nishotha, Kanji	<i>Su, uttra tantra 26/39-40</i>
6.	<i>Indralupta</i>	Marich, Mansheela, Kashish, Tuttha, Tagar, Devadaru	<i>Su.Chikitsa 20/24-25</i>
7.	<i>Shiro Arusika</i>	1.Saindhav, Horse lidha 2.Hartala, Haridra, neem, Patola patra, Yashtimadhu, Neelophar, Eranda, Bhiringraj	<i>Su.Chikitsa 20/28-29</i>
<b>c) Sharngadhara Shamita</b>			
1.	<i>Darunka</i>	1.Pariyal, Yashtimadhu, Kushta, Urad, Saindhava, water Madhu 2.Khas-khas, milk 3.Amra, Haritiki, milk	<i>Sa, Shamita, Uttarkhand 11/18-19</i>
2.	<i>Indralupta</i>	1.Tikta-Patola 2.Gunjamoola 3.Bhallataka	<i>Sa, Shamita, Uttarkhand 11/20-21</i>

3.	Hair Growth	Gokshura, Tila, Madhu, Ghee	Sa, Shamita, Uttarkhand 11/22
4.	Indralupta	Yashtimadhu, Neel-kamal, Munaka, Tila taila, Ghee, Madhu	Sa, Shamita, Uttrakhand 11/24
5.	Palitya	1.Loha Choorna, Bhringraj, Haritaki, Bibhitaki, Amalaki, black soil 2.Amla, Harikiti, Bhabitiki, Amra	Sa, Shamita, Uttrakhand 11/27-29
<b>D) Ashtang Haridya</b>			
1.	Vata-shiroroga	Kushta, Tagar, Kamal, Swetachandan	Ashtang, Haridya uttrasthana 24/7
2.	Ardhavabhedaka	Chakvadh (Vinaad)	Ashtang, Haridya, uttrasthana 24/9
3.	Shiro Arusika	1.Patola, Neem, Haridra, 2.Gomutra, Tila, Saraspa 3.Sugandhikustha	Ashtang, Haridya, uttrasthana 24/22
4.	Darunaka	1.Priyaal, Yashtimadhu, Sugandhi Kustha, Urad, Mustard, Madhu 2.Laksha, Amaltas, Adgaz, Amla, Madhu	Ashtang, Haridya, uttrasthana 24/26-27
5.	Indralupta	1.Marich, Mansheela, Kashish, Tuttha 2.Kantkari, Madhu 3.Gunja (root), Karveer, Madhu 4.Dhatura 5.Bhallataka 6.Madhu, Ghee, Tila (flower), Gokshura 7.Hastidantamasi	Ashtang, Haridya, uttrasthana 24/28-31
6.	Palitya	<b>1.Palityanasak Lepa-</b> Dugdikak, Karaveera, cowmilk 2. <b>Palityanasak Lepa</b> -Loha Choorna, Bhringraj, Haritaki, Bibhitaki, Amalaki, black soil, Ikshu rasa 3.Urad, Kodo millet,	Ashtang, Haridya, Uttrasthana 24/38, 42-43
7.	Harilooma	Milk, Priyaal, Jivaneeya gana drugs, Krishna tila	Ashtang, Haridya, Uttrasthana 24/39
8.	Hair growth	<b>Kaishvridhikar Lepa</b> -1. Krishna tila, Amla, kamal-ka-Kesar, Yashtimadhu, madhu 2.Jatamasi, Kushta, Krishna tila, Sariva, Neela-Kamal, Milk, Madhu	Ashtang, Haridya, Uttrasthana 24/40
<b>E) Bhaishajya-Ratnavali</b>			
1.	Vata Shiroroga	1.Kushta, Erandamoola, kanji 2.Mukunda Pushpa	Bha, Ratnavali Shiro-rogaadikar 2
2.	Ardhavabhedaka, Suryavarta	1.Bhavab, Hul hul 2.Jangala mamsa, Vatanasak ayushadhi 3.Krishna tila, Naladh, Madhu, Saindhav	Bha, Ratnavali Shiro-rogaadikar 5, 11-15
3.	Sankhaka	1.Shatavari, Krishna tila, Yashtimadhu, Neelo-Utapala, Durva 2.Ksheera-Vriksha	Bha, Ratnavali Shiro-rogaadikar 20
4.	Shiro Arusika	1.Neem, Ashava varcha Rasa, Saindhava 2. Purana Tila Pina, Gomutra	Bha, Ratnavali Kshudra-rogaadikar 16-17
5.	Darunka	1.Kodo millet, Madhu 2.Priyaal, Yashtimadhu, Kushta, Masha, Saindhava, Madhu 3.Neelo-Utpala kesar, Yashtimadhu, Tila, Amalaki	Bha, Ratnavali Kshudra-rogaadikar 19-21
6.	Indralupta	1. Mansheela, Kashish, Tuttha 2.Musta, Chitrak Jatipushpa, Kranja, Karveera 3.Gunja, water 4.Hastidantamashi, Rasanjana, water 5.Hastimantamshi, Tila taila	Bha, Ratnavali Kshudra-rogaadikar 22-31

		6. <i>Bhallataka, Bhrahati, Gunja, Madhu</i> 7. <i>Bhrahati Gunja, Gunjamoola</i> 8. <i>Aja ksheera, Rasaanjana, Hastidantamashi</i> 9. <i>Yashtimadhu, Neel-Kamal, Murva, Krishna tila, Bhringraj, cow milk</i> 10. <i>Amalaki, Amra</i>	
7.	<i>Palitya</i>	1. <i>Haritaki, Bibhitaki, Amalaki, Loha choorna, Bhringraj, Narikel lavana</i> 2. <i>Haritaki, Bibhitaki, Amalaki (face wash with Kashya)</i> 3. <i>Utpala, milk</i> 4. <i>Bhringraj, Japapushpa, Ajaksheera</i> 5. <i>Rasaanjana, Sankha choorna, Kanji</i> 6. <i>Loha, Amalaki, Japakusum</i>	<i>Bha, Ratnavali Kshudra-rogaadikar 32-40</i>
<b>F) Vang Sen</b>			
1.	<i>Arusika</i>	1. <i>Ashav-Varcho, Saindhav</i> 2. <i>Patol, Neem, Vasa</i> 3. <i>Khadir, Neem, Jamun Gomutra</i> 4. <i>Coopdhatvaka, Saindhav</i> 5. <i>Talmutra, Goshkadh Ras</i> 6. <i>Puran pinyaak, Kukkat mala, Gomutra</i> 7. <i>KapalVarsht kushta, Taila,</i>	<i>Ksudra Rogaadikar 100</i>
2.	<i>Sirokandu, Sirovrana</i>	<i>Sunehi, Arka, Dhatura, Gomutra, Taila</i>	<i>Ksudra Rogaadikar 116</i>
3.	<i>Darnuka</i>	1. <i>Priyaal, Madhuk, Kushta, Masha, Saindhav, Madhu</i> 2. <i>Neeloutpala, Dhatriphala, Yashtimadhu</i>	<i>Ksudra Rogaadikar 128, 136</i>
4.	<i>Indralupta</i>	1. <i>Marich, Mansheela, Kashish, Tuttha</i> 2. <i>Sayanoka, Devadaru,</i> 3. <i>Gunjaphala</i> 4. <i>Bhrahati, Madhu</i> 5. <i>Gunja, Bhallataka</i> 6. <i>Gunja, Vatsanabha, Taila, Tila, Yashtimadhu, Kanji</i> 7. <i>Gokshura, Tila, Madhu, Ghee</i> 8. <i>Hastidantamashi, Aja Ksheer</i> 9. <i>Yashtimadhu, Neel-kamal, Maridivika, taila, Ghee, Go-ksheer, Bhringaraj</i>	<i>Ksudra Rogaadikar 136-144</i>
5.	<i>Palitya</i>	1. <i>Loha choorna, Amra</i> 2. <i>Amalki, Haritki, Bhavataka</i> 3. <i>Loha Choorna, Bhirangraj, Amalki, Haritki, Bhavataka, Krishna Mitti, Ikshu</i> 4. <i>Amalki, Haritki, Bhavataka, Neem, Loha choorna, Bhringraj, Aja-ksheera</i>	<i>Ksudra Rogaadikar 154-155, 144</i>
6.	<i>Vata-Shiroroga (Shiro-shoola)</i>	1. <i>Kushta, Erandamoola, Kanji</i> 2. <i>Muchkundh (flower)</i> 3. <i>Devadaru, tagara, kustha, naladh, Sunthi, kanji</i>	<i>Shirorogaadikar 24-25</i>
7.	<i>Pitta-Shiroroga (Shiro-shoola)</i>	1. <i>Chandan, Ushira, Yashtimadhu, Balavyagrh, Nakh, Utpala, milk</i> 2. <i>Mrinala, Chandan, Utpala, Kaishar</i> 3. <i>Amalki, Kamal, water</i> 4. <i>Padama, Chandan, Karpoor, Sunthi, Neeloutpala, Ghee</i>	<i>Shirorogaadikar 50-54</i>
8.	<i>Kapha-Shiroroga (Shiro-Shoola)</i>	1. <i>Hareenu, Tagara, Sailya, Musta, Ela, Agara, Devadaru, Rasna, Sunehi, Naladh</i> 2. <i>Saral, Agara, Karnja, Devadaru, Sarish, Saindhav, Milk</i>	<i>Shirorogaadikar 59-60</i>
9.	<i>Sannipataja shiroroga (Shiroshoola)</i>	<i>Sayama, Sunthi, Sweta-Aparjita</i>	<i>Shirorogaadikar 69</i>

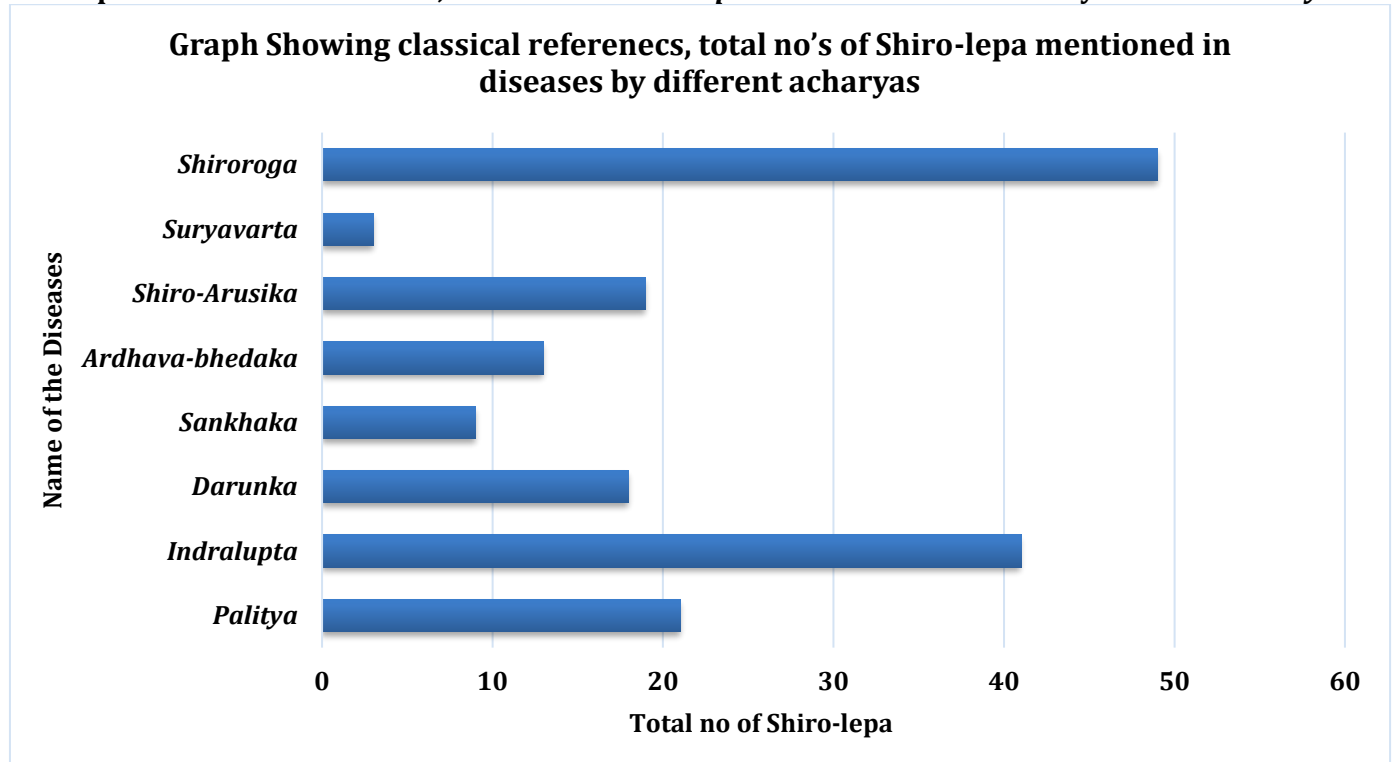


10.	<i>Ardhavabhedaka</i>	1.Tilakalka, Taila, Madhu, Saindhava 2. Chakramarda, Kanji 3. Sariva, Utpala, Yashtimadhu, Kushta	<i>Shirorogaadikar 100-104</i>
<b>G) BhavaPrakasha</b>			
1.	<i>Siraspidā</i>	<i>Kushta, Erandamoola, Sunthi</i>	<i>Bha. Pra Chikitsa Madhyama Khanda 62/21</i>
2.	<i>Ardhavabhedaka</i>	<i>Vidanga, Krishna tila</i>	<i>Bha. Pra Chikitsa Madhyama Khanda 62/52</i>
3.	<i>Sankhaka</i>	1.Daruharidra, Haridra, Manjistha, neem stem bark, Ushira, Padkam 2. Ksheera trees	<i>Bha. Pra Chikitsa Madhyama Khanda 62/57-58</i>
4.	<i>Palitya</i>	1.Lohachoorṇa, Chootmajja, Amla, Haritki, Bhavitki 2.Kashmariya, Sahachaardi (flower), Katakī (root), Loha Choorṇa, Bhirangaraja, Haritaki, Bibhitaki, Amalaki 3. Haritaki, Bibhitaki, Amalaki, Nilika Patra, Bhringraj, Loha Choorṇa	<i>Bha. Pra Chikitsa Madhyama Khanda 8/2-5</i>
5.	<i>Indralupta</i>	1.Tikta Patola 2.Gokshura, Tila (flower), Madhu, Ghrita 3. Hastidantamashi 4. Yashtimadhu, Munaka, Kamal, Taila, Ghee, milk	<i>Bha.Pra Chikitsa Madhyama Khanda 8/8-11</i>
6.	<i>Darunka</i>	1.Yashtimadhu, Kushta, Udadh, Saindhav, Madhu, Priyaala (seed) 2. Amra (seed), Haritki, milk 3. Gunja (fruit)	<i>Bha.Pra Chikitsa Madhyama Khanda 8/16-18</i>
7.	<i>Darunka, Kapala kustha, Kandu</i>	Gunja (fruit)	<i>Bha.Pra Chikitsa Madhyama Khanda 8/20</i>
8.	<i>Shiro Arusika</i>	<i>Neela-utpala, Amla, Yashtimadhu</i>	
<b>H) Yoga Ratnakar</b>			
1.	<i>Vata Shiroshoola</i>	<b>1.Kusthaadi Lepa-</b> Kushta, Erandamoola, Musta <b>2.Devadaru Lepa -</b> Devadaru, Kushta, Tagar, Jatamasi, Sunthi, Kanji, Ghee	<i>Yoga-Ratnakar Uttara Khanda Shiro Rogaasya Chikitsa 21, 23</i>
2.	<i>Pitta Shiroshoola (Pitta)</i>	1. Shatdhauta Ghrita 2.Chandan, khas, Yashtimadhu, Variyar, VYagar-Nakha, Neela-Kamal, Milk <b>3. Davyaadi Lepa-</b> Amla, Kaishru, Haubair, Kamal, Padhkantha, Chandan, Durva, Khas, Nalmoola	<i>Yoga-Ratnakar Uttara Khanda Shiro Rogaasya Chikitsa 33-35</i>
3.	<i>Kapha Shiroroga(Kapha Shiroroga)</i>	1.Herunka Beeja, Tagar, Sailaj, Musta, Ela.Agar, Devadaru, Jatamasi, Rasna, Erandamoola 2. Sunthi, Kushta, Chakbanda, Devadaru, buffalo urine	<i>Yoga-Ratnakar Uttara Khanda Shiro Rogaasya Chikitsa 39, 40</i>
4.	<i>Sannipataja Shiroroga</i>	<b>Samarphalaadi Lepa -</b> Madanphala, Raktachandan (seed), Kushpatra, Jamalgotā, Tuttha	<i>Yoga-Ratnakar Uttara Khanda Shiro Rogaasya Chikitsa 42</i>
5.	<i>Ardhavabhedaka</i>	1.Vidanga, Krishna Tila 2. Sunthi, water 3. Sariva, Kushta, Yashtimadhu, Vacha, Pippali, Neel-kamal, Kanji, Ghee	<i>Yoga-Ratnakar Uttara Khanda Shiro Rogaasya Chikitsa 52, 55, 57</i>
6.	<i>Suryavarta</i>	Sariva, Kushta, Yashtimadhu, Vacha, Pippali, Neel-kamal, Kanji, Ghee	<i>Yoga-Ratnakar Uttara Khanda Shiro Rogaasya Chikitsa 57</i>
7.	<i>Sankhaka</i>	1.Shitophala-Madan yoga, Mashri, milk 2. water, milk, Ksheera virksha	<i>Yoga-Ratnakar Uttara Khanda Shiro</i>

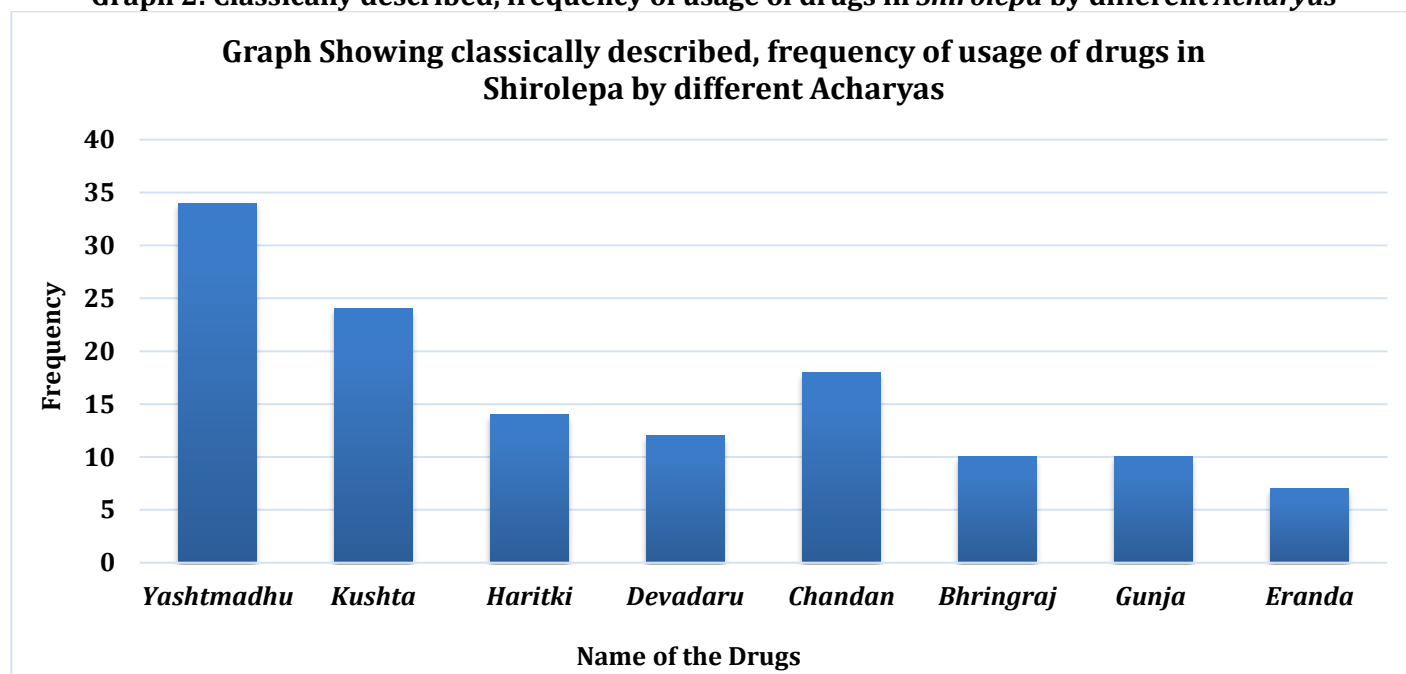
			<i>Rogaasya Chikitsa 57, 64</i>
8.	<i>Anantvata</i>	<b>Balaadi Lepa</b> -Variyar, Neel-Kamal, Durva, Pippali, Punarnava	<i>Yoga-Ratnakar Uttara Khanda Shiro Rogaasya Chikitsa 64</i>
9.	<i>Indralupta</i>	1.Brihat katuki, Madhu 2.Gunjamoola, 3.Bhallataka 4.Hastidantamasi, goat milk 5.Gokshura, Tila Flower, Madhu, Ghee	<i>Yoga-Ratnakar Uttara Khanda Kshudra roga Chikitsa 97-98</i>
10.	<i>Darunka</i>	1.Chorunji, Yashtimadhu, Kushta, Saindhava, Kanji 2.Amra beeja, Haritiki, milk 3.Khas-khas, milk 4.Kantakari 5.Adhul	<i>Yoga-Ratnakar Uttara Khanda Kshudra roga Chikitsa 104-108</i>
11.	<i>Shiro Arusika</i>	1.Neel-kamal kesar, Amla, Yashtimadhu 2. Neem, Saindhava 3. Tila, Gomutra, 4.Khadir, Neem, Jambu, Gomutra 5.Kutaja, Saindhava	<i>Yoga-Ratnakar Uttara Khanda Kshudra roga Chikitsa 109-114</i>
12.	<i>Palitya</i>	Loha Bhasma, Bhringraj, Haritaki, Bibhitaki, Amalaki, Black soil	<i>Yoga-Ratnakar Uttara Khanda Kshudra roga Chikitsa 115</i>
<b>I) Gada Nigrah</b>			
1.	<i>Vata Shiroroga</i>	Kushta, Erandamoola, Kanji	<i>G, Nigrah Shirorogadikar 1/21</i>
2.	<i>Pitta Shiroroga (Shiro shoola)</i>	1.Sweta Chandan, Rakta Chandan, Kushta, Sugandhbala, Naga kesar, Milk, Ghee 2. <b>Shatviryaadi lepa</b> -Shatavari, Kushta, Tila, Mahua, Neel-Utpal, Durva, Punarnava 1. Shathadhoutha Ghritam 2. <b>Chandanaadi lepa</b> -Sweta Chandan, Ushira, Yashtimadhu, Vyagrahnakh, Bala, 3. Neelkamal, ksheer <b>Mrinnalaadi Lepa</b> -Mrinnaal, Vish, Shaluk, Chandan, Utpala kesar, Ghee, Amalaki, Neel-kamal	<i>G, Nigrah Shirorogadikar 1/21-34</i>
3.	<i>Kapha-Shiro roga</i>	1.Pippali, Musta, Sunthi, Yashtimadhu, Shatpushpa, Neel-kamal, Water 2.Devadaru, Tagar, Kushta, Nalad, Sunthi, Kanji 3.Saral, Devadaru, Sugandhbala, Kushta, Gandatrina, Yavakshara, Saindhava, Waters	<i>G, Nigrah Shirorogadikar 1/39-41</i>
4.	<i>Sannipataja</i>	1.Syama, Sunthi, Sweta-chandan, Water 2.kushta, Sunthi, Yashtimadhu, Shatapushpa, Neel-Kamal, Swet-jeerak, Water	<i>G, Nigrah Shirorogadikar 1/43-44</i>
5.	<i>Sankhaka</i>	Ekashathila, Pundarik, Yashtimadhu, Neel-Kamal, Padmaka, Vaitasa, Murva, Daruharidra, Haridra, Manjistha, Reetha, Kranja, Ushira	<i>G, Nigrah Shirorogadikar 1/73-74</i>
6.	<i>Indralupta</i>	1.Indra-varuni, Gomutra, Ghee 2.Bhrahati, Gunja, Bhallataka, Madhu	<i>G, Nigrah Shirorogadikar 1/77-78</i>

**Table 2: No of Lepa's mentioned in samhita by Different Acharyas**

S.No	Disease	Charak	Sushtrut	Vagbhata	Saranghara	Vang sen	Bhava Prakasha	Bhasijya Ratnavali	Yoga Ratnakar	Gada nigraha	Total
1.	<i>Palitya</i>	2	0	3	2	4	3	6	1	0	21
2.	<i>Indralupta</i>	0	1	7	3	9	4	10	5	2	41
3.	<i>Darunka</i>	0	0	2	3	2	3	3	5	0	18
4.	<i>Sankhaka</i>	0	2	0	0	0	2	2	2	1	9
5.	<i>Ardhava Bhedaka</i>	0	1	1	0	3	1	3	4	0	13
6.	<i>Shiro-Arusika</i>	0	2	3	0	6	1	2	5	0	19
7.	<i>Surya-Varta</i>	0	1	0	0	0	0	1	1	0	3
8.	<i>Shiro-Shoola (Shiroporaga)</i>	5	4	1	0	10	6	2	8	13	49

**Graph 1: Classical references, total no's of Shiro-lepa mentioned in diseases by different Acharyas****Table 3: Classically described, frequency of usage of drugs in Shirolepa by different Acharyas**

S.no	Name of the drug	Frequency
1	<i>Yashtimadhu</i>	34
2	<i>Kushta</i>	24
3	<i>Haritki</i>	14
4	<i>Devadaru</i>	12
5	<i>Chandan</i>	18
6.	<i>Bhringraj</i>	10
7.	<i>Gunja</i>	10
8.	<i>Eranda</i>	7

**Graph 2: Classically described, frequency of usage of drugs in *Shirolepa* by different Acharyas**

Data was collected from Ayurvedic physicians practicing *Shirolepa* and previous *shirolepa* articles.

**Indication of *lepa*:** *Shiro-shoola, Vata, Pitta and Kapha shiro-roga, Darunka, Palitya, Suryavarta, Ardhava-bhedaka, Sankhaka, Shiro arusika, Indralupta, Shiro-kandu, Kapala kustha.*

**Contraindications of *lepa*:** *Atisara, Jwara, Karnashula, Vatavikara, Adhmana, Arochaka, Ajeerna, Bhuktavat.*<sup>[6]</sup>

**Standardization of *Shirolepa*:** It is essential for ensuring consistency in preparation, dosage, and therapeutic efficacy. A systematic method begins with identifying the area of application- either the scalp alone or the scalp with forehead. In adults, the average scalp surface area is approximately 600–700 cm<sup>2</sup>. The traditional application involves a thick layer of about 0.5cm, which translates to a required paste volume of roughly 350ml, calculated using the formula: Volume = Surface Area × Thickness. To prepare this amount, a powder-to-liquid ratio of 1:2 or 1:3 is commonly used depending on the herbal composition and desired consistency. For example, at a 1:2 ratio, about 115–120 g of drug powder (in powder if it is more than 1, the you should divide the dose of total used powder in a paste) is mixed with 230–240 ml of liquid as base (base of this medicated paste changes according to the *Dosha* involvement in the disease, base may be *takra*/oil/water or decoction). This formulation ensures sufficient coverage and optimal adhesion to the scalp. and also selected drug from classical references or one of the combination or may try make your combination is boiled in milk. Curd is made from this boiled and cooled milk. *Takra* is prepared from this curd. Selected drug is taken and soaked in water or

may take *Takra* (if have scalp psoriasis) for over-night in mud vessel. Next day paste is prepared from this mixture without adding water.

**B) Preparation of the patient<sup>[6]</sup>:** The head of the patient is to be shaved. *Shiro abhyanga* is to be carried out. Then patient has to sit comfortably on a chair and *Varti* is to be tied around patient's head.

**C) *Pradhana karma*:** Prepared paste is applied on *Ucchabhaga* (top of the head) first, then *Purvabhaga* (front side of head), then *Dakshina bhaga* (right side of the head), *Prustabhaga* (back side of head) and lastly on *Vama bhaga* (left side of the head). Thickness of the *Lepa* should be of 1 *Angula*. At the centre of the head, a trench is made and *Taila* is poured into it. *Kamala patras* are covered on the applied paste and tied.

**D) *Paschat karma*:** Lotus leaves/Banana leaves and the paste should be removed. The head is wiped with clean cloth. *Mrudu Abhyanga* has to be done. Afterwards head is to be washed. *Rasnadichurna* is applied to vertex.

**Duration of *Shirolepa*:** ½ *Yama* (90 minutes) to 1 *Mahurtha* (48 min) or until the diseases recover. And course of *Shirolepa* is 14 days to 21 days. *Kala: Sadharana kala* and *Ashada, Ashwini, Phalguna* is ideal for application of *Shirolepa*.<sup>[6]</sup>

Acharya *Dalhana* explain about the *Kaarmukta* of *Shirolepa*, through *Triyakavaha damani* these very channels, the *Virya* (potency) of application of *Shirolepa* is processed by the '*Bhrajaka agni*' (the metabolic fire responsible for skin functions) and enters into the internal parts of the body. Through these very channels, the sense of touch (*Sukha-dukha rupa sparsha*) is grasped by the *Manas* (mind), which



follows the sensory impressions. These channels, spread throughout the body, are primarily designated for the function of touch perception (*Sparsha grahana*). Since the mind is also spread along these channels, it pervades the entire body through them. Hence, for those channels that *Urdhvaga srotas*. *Dalhana* further explains that these channels are also responsible for *Sparsha grahana* (touch perception). The *manas*, which follows sensory impressions, is intimately connected with these channels, allowing the therapeutic effects of *Shirolepa* to influence both physical tissues (*Sharira*) and *Manas* (sensory-mind functions). This Ayurvedic model emphasizes a holistic action, where the external application of *Shirolepa* not only benefits local tissues like skin, scalp, and hair but also has a calming, balancing effect on the mind via sensory integration.

Thus, *Shirolepa*'s action extends beyond mere topical application, it becomes a form of *Bahya sneha karma* that supports dosha balance, particularly *Vata* and *Pitta*, and nourishes the *Shiras* (head), which is the seat of *Indriyas* (sense organs) and *Manas*.

#### Mode of Action according to Modern Science

The scalp skin exhibits unique physiological properties that facilitate the absorption of substances applied topically. Structurally, the scalp has a relatively thin epidermis, a dense vascular network in the dermis, and abundant hair follicles with associated sebaceous glands, all of which contribute to its high permeability. The primary mode of absorption involves transdermal penetration through various pathways: transcellular (across cells), intercellular (between cells), and trans-appendageal (via hair follicles and sebaceous glands).

#### A) Transcellular Absorption of *Shirolepa* in Scalp Skin

In the application of *Shirolepa*, transcellular absorption plays a significant role. Here, the active constituents of the herbal formulation penetrate directly across the corneocytes of the stratum corneum, traversing the lipid bilayers and aqueous domains within cells. Lipophilic compounds diffuse through the lipid-rich zones, while hydrophilic molecules permeate via aqueous channels within cells. This direct pathway allows active phytochemicals of *Shirolepa*, such as volatile oils and alkaloids, to reach deeper layers of the scalp, exerting therapeutic effects on underlying tissues and structures like hair follicles, sebaceous glands, and scalp muscles.

#### B) Intercellular Absorption of *Shirolepa* in Scalp Skin

Intercellular absorption of *Shirolepa* occurs through the spaces between the corneocytes of the stratum corneum. The herbal components navigate the complex lipid matrix that surrounds the cells, diffusing

through the intercellular lipids comprising ceramides, cholesterol, and free fatty acids. This pathway is especially favorable for lipophilic constituents, such as essential oils and fat-soluble phytochemicals, present in *Shirolepa*. The intercellular route allows these compounds to penetrate the superficial skin layers, reaching the viable epidermis and dermis, where they exert local therapeutic action such as reducing inflammation, nourishing hair follicles, and improving scalp health.

#### c) Trans-appendageal Absorption of *Shirolepa* in Scalp Skin

*Shirolepa*, when applied to the scalp, also penetrates via the trans-appendageal route, utilizing the hair follicles and sebaceous glands as channels for absorption. These structures form natural shunt pathways that bypass the stratum corneum barrier, allowing direct delivery of herbal constituents into deeper layers of the scalp. Lipophilic compounds in *Shirolepa*, such as essential oils and lipid-soluble phytochemicals, preferentially accumulate in sebaceous-rich areas of the follicles. This mode of absorption enhances local therapeutic effects, including nourishing hair roots, reducing inflammation, and improving scalp health, thus playing a critical role in the effectiveness of *Shirolepa*.

#### DISCUSSION

The therapeutic potential of *Shirolepa* is extensively acknowledged in classical Ayurvedic texts, with detailed references to its use in managing a wide spectrum of disorders, ranging from *Shiropaga* (head disorders) to *Manasika Rogas* (mental health conditions) and dermatological issues. However, the clinical landscape reveals an inconsistent application of this therapy, largely attributed to the lack of standardized protocols. The present study bridges this critical gap by juxtaposing classical guidance with contemporary clinical observations to develop a unified and evidence-informed protocol.

The classical review revealed that ancient treatises offer not only precise indications and formulations for *Shirolepa* but also emphasize the importance of factors such as dosha predominance, seasonal variation, and patient-specific characteristics and from all the *Shamitas*, *Gada nigras* maximum no of *Shirolepa*. For, *Shiroshoola Bruhatrayi* and *Laghutrayi* explain almost same ingredients in their composition. However, these details are often underutilized in current clinical settings. Our practitioner surveys, review of modern literature and previous published article [7, 8, 9] highlighted that while *Shirolepa* is widely used, its application methods, duration, and selection criteria vary greatly across institutions and individual practices.

This variability undermines the reproducibility of outcomes and weakens the reliability of clinical evidence supporting its use. By synthesizing classical descriptions and aligning them with modern clinical needs, we proposed a standardized protocol encompassing patient selection, procedural sequence, formulation classification, retention duration, and post-application guidelines. Such uniformity can not only enhance therapeutic outcomes but also support the documentation and validation of results through controlled studies.

Moreover, standardization serves as a crucial step toward the integration of Ayurvedic therapies like *Shirolepa* into broader healthcare frameworks. It facilitates better training, monitoring, and regulatory compliance, all of which are essential for the advancement of Ayurvedic clinical practice. This discussion underscores the need for continued collaborative efforts to refine and disseminate standardized clinical protocols while maintaining the integrity of traditional wisdom.

## CONCLUSION

*Shirolepa*, with its multidimensional therapeutic potential, stands as a unique contribution of Ayurveda. However, its broader clinical utility is hindered by lack of procedural uniformity. This study synthesizes classical knowledge with current clinical realities to offer a practical, standardized protocol. Standardization not only validates Ayurvedic therapies but also strengthens their role in contemporary integrative healthcare.

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## Abbreviations

WNL: Within Normal Limits

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