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**Review Article** 

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# EXPLORING AYURVEDIC INSIGHTS AND APPROACHES FOR MANAGING LOW BACK PAIN: - A COMPREHENSIVE REVIEW

\*Sonali Dungarwal<sup>1</sup> and Babita Dash<sup>2</sup>

<sup>1</sup>PG Scholar Final year, Department of Panchkarma,Pt Khushilal Sharma Govt. Ayurveda college and hospital Bhopal

<sup>2</sup>Assissant Professor, Pg department of Panchkarma,Pt khushilal Sharma Govt.Ayurveda

College and hospital Bhopal

\*Corresponding Author's Email ID: <a href="mailto:sonalidungarwal123@gmail.com">sonalidungarwal123@gmail.com</a>

### Abstract

Back pain, in India is quite common affecting about 6.2% of the population and sky rocketing to a 92% among construction workers. This ailment not only presents medical difficulties but also bears substantial economic consequences since it is among the leading causes of disability Although some people may naturally recover from this ailment it still puts a strain on healthcare resources. This article offers a critical examination of the treatments while emphasizing the need for a complete approach to effectively and economically solve the hacking problem. The primary objective is to describe back pain, which affects 70–85% of adults. The objective is to fill in the study gaps by investigating the information on low back pain that can be found in traditional Ayurvedic text..

To accomplish this goal, we reviewed papers that had been printed in reputable journals. We particularly reviewed the history of lumbar radiculopathy, sciatica, and back discomfort. Databases like PubMed, Google Scholar, Scopus, and others were thoroughly searched. Our goal was to gather and examine data about many forms of back pain that were mentioned in Ayurvedic classics.

The effects of pain can be profound on one's health as well as finances. For people under 45,

it is the primary cause of disability; for those over 45, it is the third most leading cause. To

properly manage this illness while controlling costs. It is crucial to understand the severity

of this condition in order to effectively manage it while keeping costs under control.

An understanding of problems linked to low back pain that can be found in Ayurvedic

writings is revealed by the review. It includes Katishoola, Katigraha, Gridhrasi, and

*Trikshoola* . *Trikvedna* is one of them, among others., Addtionaly it can be gained insight into

their pathophysiology through Samhita, along with their suggested treatment method a well

as Pathya and Apathya.

**Keywords**: *Katishoola, Katigraha, Gridhrasi, Trikshoola, Trikvedna* Sciatica, Lumbar

Radiculopathy

Introduction

Low back pain is a commonest clinical presentation in musculoskeletal disorder due to

spinal pathology. Change of lifestyle in developing countries has created several

disharmonies in biological system. Factors like improper sitting postures, jerky movements

in travel, sports activities and bad sleeping posture etc. are the important factors to produce

spinal disorders. The most vulnerable musculoskeletal structure is spine, especially, the

lumbar spine which bears the whole body weight of individual and that's why disorder is

commonly seen in lumbar vertebrae region.

Low back pain is the primary cause of impairment among people under the age of 45 and the

third greatest cause of disability among those over the age of 45, both of which may be

financially and medically catastrophic. The medical system usually fails to recognize this

condition early, resulting in disproportionate medical and economic consequence <sup>1</sup>The

occurrence of pain (LBP), in India varies greatly with rates ranging from 6.2% in the general

population to as high as 92% among construction workers. This significant difference can be

attributed to factors such, as the groups being studied, research goals, demographics and the

varying definitions of pain used in different studies<sup>2</sup> Men are often affected in their 40s, while

women are affected in their 50s and 60s.3,4

Strain in the muscles or soft tissues, such as the ligaments and tendons attached to the

vertebrae, is typically the cause of back discomfort. There are times when strain on the

intervertebral disc causes it to expand out, or herniate, pressing on nearby nerves and producing disorders like sciatica<sup>5</sup>The intensity of the pain correlates with decreased overall productivity of the individual and a loss of the ability to function normally.

It is considered acute if it lasts for than 6 weeks sub-acute if it persists for 6 to 12 weeks and chronic if it continues for more than 12 weeks Some classify it into two as acute (lasting for 6-12 weeks) and chronic .<sup>6</sup>

When *Suddha vata* or *Sama vata* is present in *Kati Pradesh* and symptoms such as *ruja* with *stabdhata* are observed, the condition is referred to as *Katishoola*.

*Kati pradesha* is described as an important seat of *Vata dosha*. In *Katishoola*, vata gets vitiated in its *swasthana*. In the texts, various terms were used to describe ailments related to the back.

"Pristagraha" was one name used to describe back stiffness. has been included in *Charak Samhita* Chapter <sup>7</sup> as *Vata Nanatmaja Vyadhi*, along with symptoms that are associated with it, such *as Pada Shoola, Pada Suptata, Prishta Shoola, Trika Shoola, etc.* 

Another term, "Gridhrasi," that is associated with sciatica. It is categorized as VatajaNanatmaja Vyadhi, a condition primarily caused by imbalanced Vata Dosha7. AcharyaCharaka mentioned "Jangha UruTrikaPrista RogaSosha" as a symptom of Gudagata Vata indicating diseases that affect the leg, thigh, hip, and back while causing emaciation 8. The term "Gridhrasi" is equivalent to modern-day sciatica. It is described as a Vata Vyadhi9. It is characterized by hip pain followed by involvement of the lumbar region, back, thigh, knee, leg, and feet. It can also be accompanied by pulsatory sensations 10. Additionally, "Katinistoda" refers to pricking lumbar pain and is considered a symptom of Vatarakta 11. "Trikvedana" denotes pain in the hip region associated with imbalanced Vata in the tract 12. On the other hand, "Kubjata" represents a spine linked to imbalanced Vata affecting musculofibrous and ligamentous structures 13. In "CharakaSamhita," the terms "Antarayam" and "Pristayam" are used to describe deformed conditions of the back related to disorders 14,15.

In Sushruta Samhita, Acharya Shushrut has included Katishoola as a symptom in Vataja Arshas, Vankshanotha Vidhradhi<sup>16</sup>, Bhagandar (Fistula in ano), and in seventh stage of Sarpavisha.

In "BhelSamhita,", "Katishoola" is classified as a Vata Vyadhi, referring to conditions causing

back and lumbar pain these condition are often associated with complication arising from

Panchkarma procedures of Vaman and Virechan <sup>17</sup>. Kati Shoola and Kati Graha is observed as

a symptom of various diseases like *Vataja Kasa* etc. and *Mandagni* and impeded movement

of *Vata* are the main causes for production of *Kati Shoola*.

. Trika Vedana as a symptom a has included In Pakwashaya gata Vata-18 Additionally,

"Gridhasi is described in the "SusrutaSamhita," emphasizing its nature. This condition leads

to the loss of motor function in the ankle and toes due to imbalanced Vata Dosha <sup>18,19,20</sup>To

treat "Gridhrasi, a Raktmokshan (bloodleting procedure) subtype called "Siravedhan" is

recommended 21

In "HaritaSamhita", it is mentioned that "Katishoola" can be a symptom of "Gridhrasi" 22. The

"Kashyap Samhita Kati Shoola has been mentioned as a disease due to mismanagement of

labor (Dushtaprajata), etiology, pathology etc along with eight types of Shoola has been

explained in Khilasthana 18th 23

In *Gadanigraha Vaidya Shodhala* had mentioned at the introduction of *Vata Rogadhikar*a that

Vatavyadhi leads to all other disorders. And provided information about the symptoms,

pathogenesis, and formulations for treating "Katigraha" Katigraha as a separate disease

entity has been mentioned for the first time in this text. The chief complaint of *Katigrah* is

Kati Shoola (Backache). Vata (Saama or Niraama) movement in to Kati and residing there

produces the pain. <sup>24</sup>

Bhav Prakash explains *Kati Graha* as a separate disease in *Amavata Chikitsa Adhikara*.they

distinguished between *trikshool* and *katigraha* .with *trik* referring to the area around the joint

of the column and hip bone <sup>25</sup>

Vyadhi, it has been mentioned as Kati Sandhigata Vata,

Kati Vata, Trika Shoola. Hence, these can be considered as the synonyms of Kati Shoola.

"Yogaratnakar" introduced terms like "Kati SandhigataVata," "Kati Vata," and "Trikshoola" 26.

Additionally, in "SharangdharSamhita," they classified "Katishoola" under the category of

Vataj Nanatmaj Vikara" <sup>27</sup>.

**Causes:** In classics there is no specific *Nidana* has been mentioned for *Katishoola*. *Katishoola* 

is a Vatavyadhi, so general Nidana of Vatavyadhi can be considered as Nidana of Katishoola

Moreover, Asthi being the dhaatu involved in the pathogenesis, Nidana for Asthivaha

srotodushti may act as Nidanas for Katishoola. In addition to these, Dhatukshaya and

*Margavarodha* have been mentioned to be the root cause of all the *Vatavyadhis*. Therefore,

all the etiological factors of *Vatavyadhi* as well as *Vata Prakopa* are taken as *Nidana* of

Katishoola According to various texts, the dietary factors that contribute to Kati Shoola

include a range of characteristics such as Kashaya (astringent), Katu (pungent), Tikta (bitter),

Rooksha (dry), Laghu (light), Sheeta (cold), Alpabhojana (light meal), Abhojana (fasting),

Vallura (dry meat), ShuskhaShaka (dried vegetables), Uddalaka (variety of barley), Neevara

(variety of rice), Mudga (green gram), Masura, Harenu, and Kalaya (pea).

Lifestyle causes of *Kati Shoola* include *Ativyayama* (excessive physical activity), Langhana

(fasting), *Plavana* (swimming), *Atyadhwa* (long-distance walking), Pradhavana (running),

Pratarana (jumping), Atyuchabhashana (excessive talking), Balavadvigraha (intense

physical activities), Abhighata (physical injury), Marmaghata (trauma), Bharaharana

(carrying heavy loads), Dukhashayya, Dukhasana (sitting on hard surfaces), Sheegrhayana

(sudden exposure to cold), Prapedana (excessive lying down), Atiadhyayana (excessive

reading or studying), *Ativyavaya* (excessive sexual activity), *Atijagarana* (staying awake at

night), Vegadharana (sudden cessation of physical activity), Vishamopachara (irregular

lifestyle practices), Shrama (exhaustion), Upavasa (fasting), Puravatasevana (excessive wind

consumption), and *Divasvapna* (daytime sleep).

**Pathogenesis**: *Kati Shoola*, is often caused by an aggravated *Vata Dosha*. It primarily

manifests as localized pain in the lumbar and sacroiliac region. The main factors contributing

to this pain include an imbalance in 'Vyana Vata, which leads to friction due to reduced

*Shleshaka Kapha* in the joints. Additionally, *abhighata* (referred to as injury) can also trigger

this type of pain. Generally, the pain does not radiate down to the limb unless there are issuer

with the discs. The presence of *Vata* in the lumbar region results in a depletion of *Shlesmak* 

*kapha* in the joints, making movements like flexion, extension, lateral flexion, and rotation

difficult. The severity of the pain can vary depending on factors such as the site of injury and

its duration.

Samprapti Ghataka

Dosha: Vata: Vyana vata and Apana Vata

Kapha: Shleshak Kapha

Dushya: Mamsa, Asthi.

Agni: Jatharagni, Mamsa and Asthi

Dhatwagni. Aama: Jatharagni Manda Janya Ama, Mamsa and Asthi Dhatwagni Janya Ama.

Udbhava Sthana: Pakwashaya

Srotas: Mamsavaha and Asthivaha

Srotodusti Prakara: Sanga and Vimarga Gamana

Dosha Gati: Tiryak Gati

Rogamarga: Madhyama

Adhisthana: Kati Pradesha

Vyakta Sthana: Kati Pradesha

Vyadhi Swabhava: Chirakari

**Management**: In Samhita Acharyas text extensively explained various treatment methods, for back pain. They focused on procedures like *Virechana*( purgation) *Basti* (enema) Purvakarma (Swedana and Snehana) and Katibasti (localized external oil application) as part of Panchkarma. The main objective of these treatments was to restore balance in the Vata Dosha, which is believed to be the cause of pain. <sup>28</sup>Interestingly .*AcharyaSushruta* even recommended *Siravedhana* (bloodletting) for low back pain or sciatica. In addition, to these procedures oral preparations are often described. Nowadays Ayurvedic practitioners are incorporating Marma Therapy into their practice, which involves stimulating points to address musculoskeletal disorders This time-tested therapies offer cost alternatives that show potential in managing pain when compared to mainstream approaches.

Snehan is a part of treatment, for KatiShoola. Depending on the patient's condition Snehan can be given internally through *Snehapana* (consuming ghee or oil) or externally through practices like *Abhyanga* (oil massage) or *Avagaha* (herbal bath). However, it's important to note that Snehan may not be suitable for patients with conditions like Ama, Avritavata, *Ajeerna* (indigestion) or *Aruchi* (tastelessness).<sup>29</sup> In case of associated *ama* or *kapha dosha* 

Langhana and pachan are the first line of treatment preceding snehapaan to facilate the niramavastha.

Swedana is another aspect of treatment for managing KatiShoola, It eliminate toxins, reduce pain and improve flexibility in the back region. Among the Swedana procedures Kati Basti is particularly effective, for KatiShoola. Swedana can be administered not to the back area known as KatiPradesha but also, to other affected body parts like the back or Prishta depending on the individual's condition. Additional Swedana techniques include AvagahaSweda, Pizhichil, NadiSweda, PatraPindaSweda, PindaSweda, and UpanahaSweda. The application of Swedana plays a role in relieving pain improving mobility and enhancing well-being, for individuals experiencing KatiShoola.<sup>30</sup>

PANCHKARMA	DISEASE	
Basti therapy	Katishool	Erandamuladi Niruha Basti <sup>31</sup>
		Vaitarana Basti, <sup>32</sup>
		Pippalyaldi Amavasana <sup>33</sup>

Shamana Aushadhi	DISEASE	
1.Kashayam	KatiShoola.	Sahacharadi Kashaya <sup>34</sup>
		Dashamoola Kashaya <sup>35</sup>
		RasnaerandadiKashaya <sup>36</sup>
		Rasnadi Kashaya <sup>37</sup>
		Maharasnadi Kashaya <sup>38</sup>
		Erand yog (Ga,ni 19/146)
		Rasna shunthyadi Kashayam (1/446)
	Pristhruja	Dashmool katutrayadi kahayam (Sa.yog 1/171)
	Gridhasi	Maharanadi kashayam (Sa.yog 1/3/398-:
		Shefhalika kahayam (Ga.ni .19/224)

Gridhsi,Pristh trik shool	Panchmooli yog (Ga.ni 19/144)
Katishool , Gridhsi	Shuntiyadya paayas (Ga.ni.19/147)
Katishool , Gridhsi	Erand beej paayas (Ga.ni 19/143)

	DISEASE	
2.Choorna (Powders)	KatiShoola.	AshvagandhadiChurna <sup>39</sup>
		AjamodadiChoorna <sup>40</sup> ,
		ChopachiniChoorna <sup>41</sup>

	Disease	
3.Leha (medicated pastes)	KatiShoola.	Eranda Paka <sup>42</sup>
		AjaMamsa Rasayana <sup>43</sup>
		BhallatakaLeha <sup>44</sup>
	Gradhsi,katipristhaamay	Rason pinda (Chkradutta)

	Disease	
4.Guggulu (Resin based formulations)	KatiShoola	MahayogarajGuggulu <sup>45</sup>
		Rasna guggulu (Ga.ni.19/146)
	Katishool ,gridhsi	TrayodashangaGuggulu <sup>46</sup> , (Ga.ni 19/161-164)
		LakshadiGuggulu <sup>47</sup>
		Chandra Prabha guggulu (Sa.yog 2/42)

	DISEASE	
5.Sneha Oils	KatiShoola	SahacharadhiTaila <sup>48</sup>
		MahamashaTaila <sup>49</sup> ,
		Erand tail (Chakradutta- 1/56)
	Gradhsi	PrasariniTaila <sup>50</sup>
		Aja Ghritam (Sa.yog 6/2)
		Vajigandhya tailam ( Ga.ni 19/178 )
		Kubjprasarini tail (B.R214)
	Katiruja	Mashadi tail (Sa.yog 5/95)
	Trik ruja	Amritadya ghritam Sa .yog 6/7
	Katipristh vaat	Nakul tail (B.R536-544)
	Katigrah,Pristh trik grah	Vishgarbha tail (Y.R.594-595)

## Pathya Apathya:

*Pathya* <sup>51</sup>Ahara (Dietary Habits): It is advisable to include sour and salty tastes in your diet to maintain harmony. Incorporate grains like wheat, rice (including rice and a specific type of rice called *ShashtikaShali*) well as pulses such as sesame seeds, black gram and horse gram into your meals. To ensure an intake of vegetables focus on consuming gourd, drumstick, brinjal and garlic. If you consume meat then options, like camel, cow, Varaha (boar) Mahisha (buffalo) *Magura* (hare) *Bheka* (frog) *Nakula* (mongoose) *Chataka* (sparrow) Kukkuta (rooster) *Tittira* (partridge) and *Kurma* (tortoise). Drink water of room temperature and coconut water.

#### Ahara

1 Rasas: Madhura-amla-lavana

2 Shukadhanya: Nava godhuma, Nava shali, Rakta shali, Shashtika shali.

3 Shimbi varga: Nava tila, Masha, Kulatha.

4 Shaka varga: Patola, shigru, vartaka, lashuna.

5 Mamsa varga: Ushtra, Go, Varaha, Mahisha, Magura, Bheka, Nakula, Chataka, Kukkuta,

Tittira, Kurma.

6 Jala varga: Ushnajala, Shrithasheetajala, Narikelajala (coconut water.)

7 Dugdhavarga: Go, Aja, Dadhi, Gritha, Kilata, Kurchika.

8 Mutravaga: Gomutra.

9 Madyavarga: Dhanyamla, Sura.

10 Snehavarga: Ghrita, Tila, Vasa, Majja.

11 Present day food stuffs: Orange juice, carrot, all fibrous fruits and Vegetables.

Vihara

1 Veshtana, Trasana, Mardana, Snana, Bhushayya

, 2 Present day & activities: Physiotherapy exercise, Yoga asana's, Steam bath

Vihara (Lifestyle): When it comes to Vihara, which refers to our lifestyle, we should emphasis on the importance of maintaining amindfully approach, to taking care of our mental wellbeing. To enhance our lifestyle make sure to incorporate elements like choosing Veshtana (clothing) managing our Trasana (thirst) indulging in Mardana (massages) taking regular Snana (baths) and adorning ourself with Bhushayya (ornaments) as part of our daily routines. Additionally engaging in activities such, as physiotherapy exercises practicing Asanas (yoga postures- Bhujangasana, Shalabhasana, Halasana, Uttanpadasana and Shavasana) and enjoying steambaths can greatly contribute to supporting both our mental health.

Apathya 52

When it comes to Ahara focusing on tastes and food choices to maintain a healthy life, it's important to include taste, like spicy, bitter and astringent in our diet. When selecting grains or cereals we can go for options such as barley, ragi, millet, rice and a type of rice called Shyamaka. In the pulses or legumes category consider including gram, Ming (green gram) field bean and a type of lentil called Rajamasha in our meals. For fruits prioritize Jambu (blackberry) Udumbura (fig) Kramuko (bilva) and Tinduka (tamarind). If you consume

vegetarian food items you may consider SushkaMamsa (dried meat) Kapota (pigeon) and Paravata (quail) from the meats category. Limit your consumption of modern fast food as well, as cold beverages and alcoholic drinks.

Vihara (Lifestyle): When it comes to Vihara, to take care of our health it is recommended to manage stress by avoiding things that cause Chinta (worry) Shoka (grief) and ßhaya (fear).

When it comes to our activities we should try to avoid periods of standing or sitting especially if we have a sedentary job. It's beneficial to take breaks and engage in activities, like physiotherapy exercises, Yoga Asanas or steam baths to promote both health and mental harmony. By following these lifestyle guidelines we can align ourselves in order to improve our health and vitality.

Differential Diagnosis of Back Pain in Adults include %

Spondylolisthesis is where a defect causes slippage of a vertebra on the one below. This may be congenital, post traumatic or degenerative.

Spinal stenosis it occurs due to limitation of space in the vertebral canal. The most common presentation is pseudoclaudication with discomfort in the legs on walking

. Prolapsed intervertebral disc- age related reduction in proteoglycan size within the neucleus pulposus diminishes its viscoelasticity leading to focal damage and disc herniation. These changes occur most frequently at L4 and L5 due to the increased mechanical forces across this area. Presentation is with radicular pain.

Ankylosing spondylitis – it is characterized by progressive stiffening and fusion of the axial skeleton. The prevalence is greater in those who have a high prevalence of HLA-B27

Lumbo-sacral spondylosis in the lumbosacral spine, some degrees of osteoarthritic degenerative changes are normal, radiological findings are present. Commonly occurs in middle aged and elderly degeneration of intervertebral disc and secondary osteoarthritis is often asymptomatic.

DISCUSSION: Ayurvedic principle has the concept of three Doshas-Vata, Pitta, and Kapha. They're essential, for the body's constitution and various bodily functions. Among these Vata Dosha plays a role as it governs and regulates Doshas. It is closely associated with the system

overseeing motor activities and also plays a part in pain regulation (CharakaSamhita, Chapter XX). In CharakSamhita, Acharya Charaka attributes pain to an imbalanced Vata Dosha. Provide insights into its causes such as dietary habits, lifestyle choices and traumatic events. These imbalances can disrupt the harmony of Vata that leads to ailments related to Vata (Charaka Samhita, Chapter XXII ) This condition results in numbness, motor disturbances pain accompanied by inflammation. Vata Dosha and Asthi Dhatu or bony tissue are related to each other. (Astang Hridaya Chapter XXV). It explains how fluctuations, in Vata can affect this tissue. In older age Vata Dosha can contribute to the development of conditions. This sheds light on the knowledge regarding the causes of radicular low back pain, in elderly individuals. Ayurveda Samhita also mention conditions such, as Katishoola, Gridhrasi, Katigraha, Stambha, Kubjata, Antarayaman Bahirayam under vaat vyadhi chapter. These references provide insights into localized pain, radiating pain, limitations in back movement's ,deformities in the back and spine and related pathologies .Back pain occur in disease like <u>Ankylosing spondylitis</u>, <u>Herniated disk Muscle strains</u>, <u>Sacroiliitis</u>, <u>Sciatica Spinal</u> <u>cord</u>, tumor Spinal fractures <u>Spinal stenosis</u> Spondylolisthesis and In modern medicine the line of treatment include nonsteroidal anti-inflammatory drugs (NSAIDs), muscle relaxants, opioids, spinal manipulation, physical therapy, superficial heat application, and alternative treatments like acupuncture and massage. The role of anticonvulsants like gabapentin and topiramate in managing back pain is uncertain

In treatment aspect of low back pain different kind of treatment ha been described according to pathological involvement shaman chikitsa are prescribed in samhita to treat low back pain a well a shodhan chikitsa many Acharyas have mentioned low back pain under vaat vyadhi and the line of treatment has been described just like vaat vyadhi however in some clinical condition the asociated dosha pitta and kapha were treated according to the need.various kind of panchkarma therapies like snehan swedan ,niruh basti anuvasan basti nasya etc were advised to treat low back pain

siravedha and marma therapy also prescribed by Acharyas for managing pain.

**CONCLUSION**: In summary, the problem of pain has become a widespread concern, in modem related affecting a significant portion of the population. Despite its prominence back pain and related conditions like sciatica, sacroilitis and spondylitis have a long history that has been influenced by various cultures over time.

The Samhita's texts demonstrate an understanding of painful lower back conditions such as

Katishoola, Katigraha, Gridhrasi, Trikshol, Trikvedana and more. KatiShoola requires

consideration during examinations whether it occurs independently or as a complication of

other diseases. Its management depends on factors like the stage of presentation. It can be

effectively addressed through an approach involving Panchakarma treatments Shamana

therapies and mindfully adjustments to diet and lifestyle. This combination of wisdom with

practices offers promising possibilities, for managing low back pain in today's world.

Rationale for this Review and Prospects for Future Research: This article seeks to

provide insights, into the viewpoints regarding low back pain with a focus on Ayurveda

principles. It underscores the potential of Ayurveda in managing pain and encourages

continued exploration and application of this approach, in the field.

**Conflicts of Interest:** There are no conflicts of interest.

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