



REVIEW ARTICLE

Therapeutic Potential of *Maharasnadi Kashaya* and *Shuntyadi Kashaya* in Knee Osteoarthritis

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Abstract

Knee osteoarthritis is a progressive degenerative disease prevalent among the middle aged and the elderly people necessitating long term management. Despite our improved understanding of the mechanisms and the development of new treatments, there is currently no cure that can both stop the disease from worsening and provide lasting pain relief. Hence there appears to be a general need for remedies with good efficacy and low toxicity in the management of Osteoarthritis.

Ayurveda offers effective, time-tested treatments for Osteoarthritis, known as *Sandhigata vata* (*vata* disorder affecting the joints). Physicians commonly use a multimodal approach involving *Snehana* (oleation), *Swedana* (fomentation), *Vasti* (enema), *Pathya* (dietary regulation), *Kashaya*, *Gulika* (tablets), *Arishta* (fermented medications) etc. Among these, *Kashaya* (herbal decoctions) play a vital role in managing joint disorders.

Kashaya is a water-based herbal decoction containing water-soluble compounds from multiple herbs. It exerts therapeutic effects like appetiser, digestive, detoxifying, palliative, and obstructive, especially when combined with suitable adjuvants to enhance absorption. *Kashaya* plays a key role in managing *Vatavyadhi* (Neurological and Musculo skeletal spectrum disorders), which includes disorders of connective tissue, bones, joints, muscles, and nerves, highlighting *Ayurveda's* role in both prevention and treatment.

Maharasnadi Kashaya and *Shuntyadi Kashaya* are particularly beneficial in Osteoarthritis due to their anti-inflammatory and immunomodulatory phytochemical constituents. Both contain drugs which are antiarthritic and antioxidant. While *Maharasnadi* is a decoction with more ingredients, *Shuntyadi* contains only three drugs and offers comparable relief. Their selection is based on individual patient factors, offering a holistic and personalized approach to long-term joint care.

Introduction

Osteoarthritis (OA) is the most common form of arthritis. It is a chronic, progressive musculoskeletal disease of the joints that primarily affects middle-aged and older adults. It's a multifactorial condition that causes not only the loss of articular cartilage and a narrowing of the joint space but also leads to pain, loss of function, and physical disability, which can severely impact a person's quality of life. Worldwide, Osteoarthritis is the sixth leading cause of disability with a prevalence of 22% to 39% in India^[1,2,3]. With increasing life expectancy, Osteoarthritis is fast becoming a major public health problem and cause of disability in developing countries.

^[4] The Kerala Ageing Survey in 2006 identified joint pains as the most reported morbidity with a prevalence of 53.5% among women and 43% among men above 60 years^[5]. Osteoarthritis of knee affects more than 250 million people and contributes to 14.2 million people with years lived with disability.^[6] Clinical features of OA

The condition is characterized by a focused loss of cartilage, accompanied by bone changes around the joint, such as hardened subchondral bone and the formation of bony growths called osteophytes. Potential complications of osteoarthritis include the breakdown of cartilage (chondrolysis), bone death (osteonecrosis), hairline fractures, joint infection, and the deterioration or rupture of surrounding tendons and ligaments, which can lead to joint instability.^[2] While primary osteoarthritis is typically related to aging, secondary osteoarthritis is a result of another underlying disease or condition. These can lead to difficulty with daily activities, psychological distress, and social isolation, especially among the elderly.

Investigations

Diagnosis is primarily made using X-rays, arthrocentesis, and arthroscopy. A simple X-ray is often sufficient to reveal classic signs of osteoarthritis, such as a narrowed joint space, osteophytes (bone spurs) at the joint margins, hardened subchondral bone, cysts, and loose bone fragments. Blood tests are also performed to rule out other diseases that could be causing secondary osteoarthritis. Treatment approaches include non-pharmacological methods, as well as various medications that can help manage symptoms or potentially modify the disease's progression. When patients experience persistent pain and increasing difficulty with daily activities despite medical management, surgery may be considered.^[3]

Management

Non-steroidal anti-inflammatory drugs are recommended as first-line therapy. However, selection is challenged by patient

age, comorbidities and polypharmacy, and by the drug's benefit/risk balance, all of which together influence the risk of cardiovascular, gastrointestinal and renal adverse events.^[4]

There are no curative options for Osteoarthritis except for control of pain and preventing adverse effects of medications. To manage early osteoarthritis with pain killers alone, results in escalation of the level of severity where there is no option other than Total Knee Replacement (TKR). However, the outcome of knee replacement surgery may vary depending on the profile of the patient and especially on delays in seeking intervention^[7]. Besides TKR is a very expensive treatment option. Lifestyle modifications, prompt health-seeking as well as appropriate management are crucial for the outcome in terms of pain, functional impairment, quality of life and to prevent the need for expensive surgeries^[8]

Ayurvedic approach

Ayurveda, offers a breadth of time-tested remedies for Osteoarthritis.^[9] In classical Ayurvedic nosology, Osteoarthritis corresponds to *Sandhigatavāta*, a *Vātavyādhi* characterized by joint stiffness, pain, crepitus, and restricted range of motion.^[10] In Kerala, generations of Ayurvedic physicians have successfully managed *Sandhigatavāta* using accessible, cost-effective formulations.

Treatment of knee osteoarthritis in *Ayurveda* is inherently multimodal, combining:

- *Snehana* (Oleation): External (e.g., medicated oils) and internal (e.g. *Ghrta* (Ghee), *taila*(oils), *Vasa* (animal fat) applications to lubricate joints and pacify vitiated *Vāta*.
- *Swedana* (Fomentation): Steam or herbal poultice fomentation to relieve stiffness, improve local circulation, and enhance drug penetration.
- *Vasti* (Medicated Enema): Considered the prime therapy for *Vāta* disorders, it delivers oils or decoctions rectally to balance systemic *Vāta* and target the joints.
- Dietary and Lifestyle Regulations: Emphasis on warm, unctuous, easily digestible foods; avoidance of *Vāta*-aggravating routines (e.g., cold foods, excessive travel).
- Herbal Medication and Nutritional Supplements: *Kashaya* (decoctions), *Churna*(powders), *Arishta*, *Gulika*, *Lehya* (linctus/lickable) *Rasa and Bhaṣmās* (mineral medicines) tailored to the patient's constitution and disease stage.

Therapeutic Yoga and Physiotherapy: Joint-mobilizing asanas and pranayama to strengthen surrounding musculature and maintain flexibility. Physiotherapy interventions for pain relief and mobility enhancement.

Importance of Kashaya

In Ayurveda, *Kashaya* (herbal decoction) holds a significant place among the primary dosage forms due to its quick action and potent therapeutic efficacy. It is prepared by boiling selected herbal ingredients in water to extract their active principles, making it a highly bioavailable form of medicine. *Kashaya* are particularly useful in the *Samprapti vighatana* (breaking the pathogenesis) of various diseases, especially in conditions involving *Ama* (undigested morbid matter) inflammation, and *Kapha-Vata* disorders. They are often employed in acute conditions where rapid response is required, such as fever, joint disorders, digestive disturbances, and skin diseases. The lightness (*laghu guna*) and deep penetration (*sookshma guna*) of *Kashaya* facilitate the rapid delivery of therapeutic substances to the target tissues. Various pharmacological actions such as *Pachana* (digestive), *Shodhana* (purificatory), *Shamana* (palliative), and *Stambhana* (obstructive/styptic) can be achieved through *Kashaya*^[11], by selecting disease-specific herbal combinations. Rather than using a single drug, *Kashaya* typically comprise multiple herbs and are administered with specific *Anupana* (adjuvants) that enhance the bioavailability of the decoction. For optimal efficacy, they must be prepared according to classical guidelines and used in appropriate concentrations and clinical contexts. In Ayurvedic medicine, *Kashaya* is an essential therapeutic form due to its versatility, easy absorption, and wide range of applications which make them an indispensable form in Ayurvedic therapeutics

Kashaya in Osteoarthritis

Kashaya (herbal decoctions) play a central role in Ayurvedic joint-care protocols. By tailoring the choice of *Kashaya* to individual patient profiles, considering *dosha* predominance, digestive capacity, and disease chronicity, *Sandhigatavata* is managed effectively by *Ayurveda* physicians. Both the phytochemical diversity of these decoctions and the holistic strength of Panchakarma and lifestyle framework is harnessed to achieve sustained relief in osteoarthritis. There are many decoctions useful in Osteoarthritis like *Maharasnadi Kashaya*, *Rasnerandadi Kashaya*, *Punarnnavadi Kashaya* etc.

Table No:1. Stage of Knee Osteoarthritis and useful Kashaya

Stage of the disease	Symptoms	Treatment	Kashaya
Stage 1	Early osteoarthritis with mild crepitus and intermittent pain, pain while climbing stairs or other activity involving knee joint	<i>Langhana</i> , <i>Pachana</i> and <i>Snehana</i>	<i>Punarnnavadi Kashaya</i> , <i>Rasna Saphthakam Kashaya</i>
Stage 11	Continuous pain in the knee joint with crepitus, swelling and warmth	<i>Langhana</i> , <i>Pachana</i> , <i>Shodhana</i> , <i>Snehana</i>	<i>Punarnnavadi Kashaya</i> , <i>Rasnerandadi Kashaya</i> , <i>Panchatikthakam kashaya</i>
Stage 111	Pain in the knee joint often exacerbated with activity, moderate crepitus, deformity of the knee joint	<i>Shodhana</i> and <i>Snehana</i>	<i>Maharasnadi Kashaya</i> , <i>Shuntyadi kashaya</i>

Sandhigata vata

Sandhigata vata is a condition mentioned under the *Gatavata* (migrated vata) disorders in *Vatavyadhi*.^[12] *Sandhigata vata* is a spectrum of diseases where in the vitiated *Vata dosha* afflicts the *Sandhi* region. The type of *Sandhi* afflicted depends on the nature of exposure to the aetiological factor, duration of exposure and physical strength or *Sarira bala* of the subject. The clinical features of *Sandhigatavata* are *Sopha* (swelling of the joint), *Shoola* (pricking type of pain in the joints), *Prasarana aakunchana ashakti* (restricted movement of the joints) and *Atopa* (crepitus).

Dosha and Avastha

The *samprapthi*, involves the *Vata* and *Kapha dosha* (with *Vata* being predominant) and affects the *Asthi* and *Rasa dhatu*, which are the *dushya*. The *jataragnimandya* (diminished digestive fire) and *viprakrushta nidana* (remote cause) in the joints lead to the *vyaktibhava* (manifestation) of the *roga* (disease) in the *Sandhi* (joints). This process leads to the degeneration of *asthidhatu* (bone tissue) over time and a decrease in *Shleshaka kapha* (the subtype of *kapha* responsible for joint lubrication), which disrupts the normal structure and functions of the joints. As a person ages, *Vata dosha* increases and accelerates *dhatukshaya* (depletion of bodily tissues) and *balakshaya* (loss of strength/immunity), leading to a *nirupasthambha vata avastha* (*Vata* predominant state). *Sandhigatavata* is a *madhyama roga marga vyadhi* (a disease of the middle pathway) involving the *Sandhi marma* (vital points located at joints). The high prevalence of *dhatukshaya* in a *Vatavridhnavastha* (state of increased *Vata*), combined with the involvement of *Marma*, the *Madhyama roga marga*, *Vata dosha*, and *dhatukshaya*, makes the disease *Kashtasadhya* (difficult to cure).

Chikitsa

The aim of *Chikitsa* (treatment) is to remove causative factor or disease as well as restoration of the *Doshik*(related to *dosha*) equilibrium. This is achieved by *Shodhana*(detoxification) and *Shamana* (pacification)which comprises of *Antah Parimarjana* and *Bahi Parimarjana*(internal and external purification).

Susruta has described five *Upakarma* (supportive procedure) to restore the *Dosha* and *Dhatu* in equilibrium state for *Sandhigatavata*. They are *Snehana* (oleation therapy), *Upanaha* (poultice therapy), *Agnikarma* (cauterisation), *Bandhana* (bandaging) and *Unmardana* (deep friction massage).^[13]

In *Shamana chikitsa* of *Sandhigatavata*, *Kashaya* preparations are widely used. The suitability of two *Kashaya yoga*, *Maharasnadi Kashaya* and *Shuntyadi Kashaya* in *Sandhigatavata* is discussed here considering their phytochemical properties, ease of preparation and cost effectiveness.

Maharasnadi Kashaya

Maharasnadi Kashaya ^[14] is widely prescribed for *Sandhigatavata* in *Vata* predominant *Vatakapha* stage. It contains 26 drugs as ingredients and has application in a range of disorders from Hemiplegia, Sciatica, Rheumatic diseases, Infertility etc. with change in the adjuvants.

It is a *Shamana Yoga* in *Vatavyadhi* with *Rasna* (*Pluchea lanceolata*) as the main ingredient. It is taken in double the amount whereas all other ingredients are taken one part each. Hence *Maharasnadi Kashaya* is also known as *Dwiguna rasnadi*

Table No:2 Ingredients of *Maharasnadi Kashaya* and their properties^[15]

No.	Ayurvedic Name	Botanical Name	Rasa	Guna	Veerya	Vipaka	Dosha Karma
1	<i>Rasna</i>	<i>Pluchea lanceolata</i>	Tikta, Katu	Laghu, Ruksha	Ushna	Katu	Vata-Kapha ↓
2	<i>Dhanvayasa</i>	<i>Alhagi pseudalhagi</i>	Tikta, Kashaya	Guru, Snigdha	Ushna	Katu	Vata-Kapha ↓
3	<i>Bala</i>	<i>Sida cordifolia</i>	Madhura, Tikta	Guru, Snigdha	Sheeta	Madhura	Vata ↓ (also balances Pitta, Kapha)
4	<i>Eranda Moola</i>	<i>Ricinus communis</i>	Katu, Tikta	Guru, Snigdha	Ushna	Katu	Vata-Kapha ↓
5	<i>Devadaru</i>	<i>Cedrus deodara</i>	Tikta, Kashaya	Laghu, Ruksha	Ushna	Katu	Vata-Kapha ↓
6	<i>Sati</i>	<i>Hedychium spicatum</i>	Katu	Laghu, Snigdha	Ushna	Katu	Vata-Kapha ↓
7	<i>Vacha</i>	<i>Acorus calamus</i>	Tikta, Katu	Laghu, Ruksha	Ushna	Katu	Vata-Kapha ↓
8	<i>Vasa</i>	<i>Adhatoda vasica</i>	Tikta, Katu	Laghu, Snigdha	Ushna	Katu	Vata-Kapha ↓
9	<i>Nagara</i>	<i>Zingiber officinale</i>	Katu	Laghu, Ruksha	Ushna	Katu	Vata-Kapha ↓
10	<i>Pathya</i>	<i>Terminalia chebula</i>	Kashaya, Amla, Madhura	Laghu, Ruksha	Ushna	Madhura	Tridosha ↓
11	<i>Chavya</i>	<i>Piper chaba</i>	Katu	Laghu, Snigdha	Ushna	Katu	Vata-Kapha ↓
12	<i>Musta</i>	<i>Cyperus rotundus</i>	Tikta, Katu	Laghu, Ruksha	Ushna	Katu	Tridosha ↓ (esp. Vata-Kapha)
13	<i>Punarnava</i>	<i>Boerhaavia diffusa</i>	Tikta, Kashaya	Laghu, Snigdha	Sheeta	Madhura	Vata-Pitta ↓
14	<i>Guduchi</i>	<i>Tinospora cordifolia</i>	Tikta, Kashaya	Laghu, Snigdha	Ushna	Madhura	Tridosha ↓
15	<i>Vridhdharu</i>	<i>Argyrea speciosa</i>	Tikta, Amla	Guru, Snigdha	Ushna	Katu	Vata-Kapha ↓
16	<i>Shatapushpa</i>	<i>Anethum sowa</i>	Tikta, Katu	Laghu, Snigdha	Sheeta	Katu	Vata-Kapha ↓
17	<i>Gokshura</i>	<i>Tribulus terrestris</i>	Madhura, Tikta, Amla	Guru, Snigdha	Sheeta	Katu	Tridosha ↓
18	<i>Ashwagandha</i>	<i>Withania somnifera</i>	Madhura, Tikta	Guru, Snigdha	Sheeta	Madhura	Vata ↓
19	<i>Prativisha</i>	<i>Aconitum heterophyllum</i>	Tikta, Katu	Laghu, Ruksha	Sheeta	Katu	Vata-Kapha ↓
20	<i>Kritamala</i>	<i>Cassia fistula</i>	Madhura, Tikta	Guru, Snigdha	Sheeta	Madhura	Pitta ↓
21	<i>Shatavari</i>	<i>Asparagus racemosus</i>	Madhura, Katu, Kashaya	Guru, Snigdha	Sheeta	Madhura	Vata-Pitta ↓
22	<i>Krishna</i>	<i>Piper longum</i>	Katu, Tikta	Laghu, Snigdha	Ushna	Katu	Vata-Kapha ↓
23	<i>Sahachara</i>	<i>Barleria prionitis</i>	Katu, Tikta	Laghu, Snigdha	Ushna	Katu	Vata-Kapha ↓
24	<i>Kantakari</i>	<i>Solanum xanthocarpum</i>	Katu, Tikta, Kashaya	Laghu, Ruksha	Ushna	Katu	Vata-Kapha ↓
25	<i>Dhanyaka</i>	<i>Coriandrum sativum</i>	Madhura, Tikta, Kashaya	Laghu, Snigdha	Sheeta	Madhura	Vata-Kapha ↓
26	<i>Brihati</i>	<i>Solanum indicum</i>	Katu, Tikta	Laghu, Ruksha	Ushna	Katu	Vata-Kapha ↓

Kashaya. *Shunti Churna*, *Pippali Churna*, *Ajamoja Churna*, *Yogaraja guggulu vatika* and *Eranda taila* are the *Anupana* of *Maharasnadi Kashaya*. The formulation is *Vata-Kapha shamaka* and with appropriate *anupana* useful in many ailments.

Shunṭyādi kashaya

Shunṭyādi kashaya ^[16] consist of three drugs, namely *Balā* (*Sida cordifolia*. L). *Atibalā* (*Abutilon indicum*. L) and *Shunṭi* (*Zingiber officinale*. Rosc). The combination finds mention in *Sahasrayoga*, an ancient āyurvedic treatise, under *vātavyādhi*. The *Kashaya* is *Suptivatahara* (reducing numbness) according to its reference in *Sahasrayoga*. The *Ksheera Kashaya* of the same formulation is mentioned in a traditional keralaleeya text, *Chikitsamanjari* ^[17] with *Ksheerabala taila* as *anupana*, making the *Kashaya*, more *brumhana*. The same combination is also available in market as *Shunteebaladi Choorna*.

Both *Maharasnadi Kashaya* and *Shunti* have *Vata-Kapha shamaka* property and the combination can be used in a *Vatakaphaja* and *Shoolapradhana Vatavyadhi*, like *Sandhigatavata*.

Discussion

Therapeutic Basis of Maharasnadi Kashaya

Pharmacodynamic Properties of Ingredients

Most of the drugs in *Maharasnadi Kashaya* possess *Snigdha Guna*, *Ushna Veerya*, and *Vata-Kapha Shamaka* properties. *Snigdha Guna* counteracts the *Ruksha Guna* of *Vata*, thus relieving *Stabdhatā* (stiffness) and *Atopa* (crepitus) in *Janu Sandhi* (knee joint). *Ushna Veerya* mitigates the *Sheeta Guna* of *Vata*, acting as a *Shoolahara* (pain reliever), thereby reducing *Stambha* (rigidity) and *Shoola* (pain). The *Vata-Kapha Shamaka* nature of the drugs supports the alleviation of stiffness and swelling of the knee joint.

Role of Phytochemicals and Secondary Metabolites

The curative effects are attributed to the presence of secondary metabolites such as flavonoids, terpenoids, sterols, alkaloids, and phenols. These are present in various extracts (hexane, benzene, chloroform, acetone, ethyl acetate, ethanol, methanol, and water) and are pharmacologically active.

Rasna (*Pluchea lanceolata*), the main drug in *Maharasnadi Kashaya* contains active compounds such as Quercetin and Isohamnetin. Quercetin is a potent anti-inflammatory agent that modulates macrophage activity, reducing knee swelling and stiffness. It enhances protein concentration, molecular size of hyaluronic acid, and chondroitin-6-phosphate in synovial fluid. Isohamnetin exhibits anti-inflammatory and chondroprotective actions, preventing joint tissue degeneration. Terpenes from *Pluchea lanceolata* showed significant anti-inflammatory and anti-arthritic activity in rats at 50 mg/kg orally in a carrageenan-induced paw edema model ^[9] *Guduchi* (*Tinospora cordifolia*) exhibits Strong anti-arthritic and anti-inflammatory effects in preclinical RA models. Multiple in vivo studies show it inhibits synovial inflammation and bone erosion ^[20] *Ashwagandha* also has chondroprotective action by inhibition of gelatinase activity of collagenase type 2 enzyme ^[21]

Pharmacological Profile of Shuntyadi Kashaya

Therapeutic Properties of Constituents and Actions

The ingredients of *Shuntyadi Kashaya* possess anti-inflammatory, anti-arthritic, antioxidant, and hepatoprotective properties. ^[22,23,24] They exhibit *sheeta veerya* (cold potency), *snigdha guna* (unctuousness), and *vata-kaphahara* effects, helping to relieve joint pain, stiffness, and improve mobility, making it suitable in *Vata-dominant* conditions like *Sandhigatavata*. *Balā* (*Sida cordifolia* Linn.) and *Atibalā* (*Abutilon indicum* Linn.) known together as *Balā Dwayam*, ^[25] are *Vatapittahara*, *balya* (strength-promoting), *brumhana* (nourishing), and part of the *madhuraskandha* (sweet group). They are ideal for managing *dhatukshaya* (tissue depletion) disorders like *Sandhigatavata*. ^[26] *Shunṭi*, with *Ushna Veerya* and *Vata-Kaphahara* properties, helps pacify aggravated *Vata* and *Kapha* in joints, reducing *Stambha* (stiffness) and *Vedana* (pain). *Shunti* (*Zingiber officinale*) enhances the bioavailability of co-administered drugs and has potent anti-inflammatory and antioxidant effects ^[27]

Phytochemistry and Pharmacodynamics

Balā root contains alkaloids like ephedrine, vasicine, choline, and betaine. It is traditionally used in rheumatism, urinary disorders, and general debility. Research has shown that a *Kashaya* made from the root of *Sida cordifolia* possesses anti-

Table No:3 Ingredients of Shuntyadi Kashaya and their properties ^[18]

No.	Ayurvedic Name	Botanical Name	Rasa	Guna	Veerya	Vipaka	Dosha Karma
1	Balā	Sida cordifolia Linn.	Madhura	Guru, Snigdha	Sheeta	Madhura	Vata-Pitta ↓
2	Atibalā	Abutilon indicum Linn.	Madhura	Guru, Snigdha	Sheeta	Madhura	Vata-Pitta ↓
3	Shunti	Zingiber officinale Rosc.	Katu	Laghu, Snigdha	Ushna	Madhura	Kapha-Vata ↓

arthritic properties. This was confirmed through laboratory tests that evaluated its ability to inhibit protein denaturation and proteinase enzyme activity, two key mechanisms involved in arthritis. The evaluation of anti-arthritic activity through Inhibition of Protein denaturation method and Inhibition of proteinase enzyme activity proved that the *Kashaya* of *Sida cordifolia* root has the ability to resist arthritis^[28] *Atibalā* root is rich in fatty acids and phytosterols. It is used in Ayurveda for gout, polyuria, and hemorrhagic conditions. It demonstrates anti-inflammatory and analgesic activity. Its extract has shown superior in vitro anti-arthritic action compared to acetylsalicylic acid. *Shunṭi* (*Zingiber officinale*) supports joint health through its rich phytochemistry, including gingerols, shogaols, and volatile oils. These compounds exhibit significant anti-inflammatory, analgesic, and antioxidant activities by inhibiting COX/LOX pathways, cytokines (TNF- α , IL-1 β), and oxidative stress mechanisms central to *Sandhigatavata*. Experimental and clinical studies confirm its efficacy in reducing joint pain, swelling, and improving mobility, with fewer side effects than NSAIDs^[29,30,31] The ingredients of *Shuntyadi Kashaya* synergistically act to alleviate symptoms of joint disorders, particularly *Sandhigatavata*, through their nourishing, anti-inflammatory, and tissue-strengthening effects.

Phenolic compounds, the common water-soluble antioxidants in plants, play a protective role in *Sandhigatavata* by scavenging free radicals and preventing bone and cartilage damage^[32] In clinical practice, *Kashaya* formulations are effective in managing *Vatavikara* with *Kapha* association due to their *Amahara* action. *Maharasnadi Kashaya* and *Shuntyadi Kashaya* are suitable for *Sandhigatavata* with predominant *Vata* and mild *Kaphanubandha*, as both contain *Shoolahara* and *Balya* drugs. While *Maharasnadi Kashaya* is costly and complex to prepare, *Shuntyadi Kashaya* is simpler, with easily available ingredients. *Maharasnadi* has broader use, whereas *Shuntyadi* acts specifically in *Sandhigatavata*.

Conclusion

Osteoarthritis of the knee, a common degenerative joint disorder in the elderly and those with overuse, presents with pain, stiffness, swelling, and limited mobility closely resembling *Janu Sandhigatavata* in Ayurveda. *Kashaya* formulations like *Maharasnadi Kashaya* and *Shuntyadi Kashaya* are effective due to their anti-inflammatory, analgesic, anti-arthritic, and antioxidant properties. Both are suitable in *Vata-Kapha* dominant conditions, especially when *Snigdha*, *Sheeta Guna*, and *Tikta Rasa* drugs are indicated. Combined with *Bahiparimarjana* therapies like *Abhyanga*, *Pichu*, *Mardana*, and *Upanaha*, they offer lasting relief in this chronic condition

References

1. Selvan, G.; Libu, G. K.; Abdul Gafoor, G. S.; et al. *Glob. J. Res. Anal.* 2018, 7 (6), 71–74.
2. Chopra, A.; Patil, J.; Bilampelly, V.; Relwane, J.; Tandle, H. S. Prevalence of Rheumatic Disease in Rural Population in Western India: A WHO-ILAR-COPCORD Study. *J. Assoc. Physicians India* 2001, 49, 240–246.
3. Mahajan, A.; Jasrotia, D. S.; Manhas, A. S.; Jamwal, S. S. Prevalence of Major Rheumatic Disorders in Jammu. *JK Sci.* 2003, 5, 63–66.
4. Woolf, A. D.; Pfleger, B. Burden of Major Musculoskeletal Conditions. *Bull. World Health Organ.* 2003, 81 (9), 646–656.
5. Sheela, J.; Jayamala, M. Health Condition of the Elderly Women: A Need to Enhance Their Well-Being. A Survey Report. *Int. J. Soc. Anthropol. Stud.* 2008, 1 (1); Cited in: Pai, P. G. *Pathways to Health Seeking, Treatment and Outcomes in Persons with Severe Osteoarthritis of Knees in South Kerala*, 2013.
6. Singh, B. B.; Mishra, L. C.; Kohlbeck, F.; Aquilina, N. Usefulness of Guggul for Osteoarthritis of the Knee: An Experimental Case Study. *Altern. Ther. Health Med.* 2001, 7 (2), 114–120.
7. Pai, P. G. *Pathways to Health Seeking, Treatment and Outcomes in Persons with Severe Osteoarthritis of Knee*; Dissertation; AMCHSS, SCTIMST: Thiruvananthapuram, Kerala, 2012.
8. Singh, B. B.; Mishra, L. C.; Kohlbeck, F.; Aquilina, N. Usefulness of Guggul for Osteoarthritis of the Knee: An Experimental Case Study. *Altern. Ther. Health Med.* 2001, 7 (2), 114–120.
9. Vagbhata. *Ashtangahridaya*; Sarvangasundari Commentary; Chaukhambha Prakashan: Varanasi, India, 2002; Nidanasthana 15/14.
10. Acharya, G. S. *Roganidana and Vikritivigyan*, Vol. 2; Chaukhambha Prakashan: Varanasi, India, p 368–369.
11. Reddy, R. K.; Kalpana, A. *Bhaishajya Kalpana Vijnanam*, 3rd ed.; Choukambha Sanskrit Sansthan Publishers: Varanasi, India, 2004; p 165.
12. National Institute of Indian Medical Heritage. *Charaka Samhitā (e Samhitā)*, Chikitsā Sthāna, Chapter 28, Verse 23–24; Version 1.0; Hyderabad: National Institute of Indian Medical Heritage; <https://niimh.nic.in/ebooks/ecaraka/> (accessed 2025-06-16).
13. National Institute of Indian Medical Heritage. *Suśrutasaṃhitā (e Samhitā)*, Chikitsasthana, Chapter 4, Verse 8; Version 1.0; Hyderabad: National Institute of Indian Medical Heritage; <https://niimh.nic.in/ebooks/esushruta/> (accessed 2025-06-16).
14. Krishnan Vaidyan, A. K.; Anekkalil, Gopalapilla, S. *Kashaya Yogas. Sahasrayogam*, 21st ed.; Vidhyarambham Publishers: Alappuzha, India, 1996; p 77–85.
15. Bhavamishra. *Bhavaprakasa Nighantu*; Chuneekar, K. C., Ed.; 1st ed.; Chaukhambha Bharati Academy: Varanasi, India, 1978.
16. Krishnan Vaidyan, A. K.; Anekkalil Gopalapilla, S. *Kashaya Yogas. Sahasrayogam*, 21st ed.; Vidhyarambham Publishers: Alappuzha, India, 1996; p 77–85.
17. Namboodiri, D. S. *Chikitsāmanjarī*, 3rd ed.; Vidyārambham Publishers: Alappuzha, India, 1996; Chapter Vatyādhī, verse 226.

18. Bhavamishra. *Bhavaprakasa Nighantu*; Chuneekar, K. C., Ed.; 1st ed.; Chaukhambha Bharati Academy: Varanasi, India, 1978.
19. Kiran, K.; Vasantha, B.; Totad, M. Combined Effectiveness of Maharasnadi Kashaya with Shunti Churna and Matra Basti with Ksheerabala Taila in Janu Sandhigata Vata (Osteoarthritis Knee): An Open Label, Single Arm Clinical Study. *J. Ayurveda Integr. Med. Sci.* 2020, 4, 62–67. <https://doi.org/10.21760/jaims.5.4.11>.
20. Sannegowda, K. M.; Venkatesha, S. H.; Moudgil, K. D. Tinospora Cordifolia Inhibits Autoimmune Arthritis by Regulating Key Immune Mediators of Inflammation and Bone Damage. *Int. J. Immunopathol. Pharmacol.* 2015, 28 (4), 521–531. <https://doi.org/10.1177/0394632015608248>.
21. Shahidi, F.; Wanasundara, P. K. Phenolic Antioxidants. *Crit. Rev. Food Sci. Nutr.* 1992, 32, 67–103.
22. Anti-Inflammatory and Hepatoprotective Activities of Sida Rhombifolia Linn. *Indian J. Pharmacol.* 1997, 29 (2), 110–116.
23. Hepatoprotective Activity of Abutilon Indicum on Experimental Liver Damage in Rats. *Phytother. Res.* 2005, 12 (1), 62–64.
24. Some Phytochemical, Pharmacological and Toxicological Properties of Zingiber Officinale Rosc. *Food Chem. Toxicol.* 2008, 46 (2), 409–420.
25. Sastry, J. L. N. *Dravyagunavijnana*, Vol. 2; Chaukhambha Orientalia: Varanasi, India, 2012; p 87.
26. Nighantu Adarsh; Bapalala, G. Vaidya. Vol. 2, Reprint ed.; Chaukhambha Bharati Academy: Varanasi, India, 2009; p 159.
27. Bioavailability Enhancers of Herbal Origin: An Overview. *Asian Pac. J. Trop. Biomed.* 2013, 3 (4), 253–266.
28. Varghese, A.; Eapen, J. In Vitro Anti-Arthritic Activity of Kashaya of Sida Cordifolia Linn. *Int. J. Ayurveda Pharm. Res.* 2018, 6 (7), 60–64.
29. Grzanna, R.; Lindmark, L.; Frondoza, C. G. Ginger-An Herbal Medicinal Product with Broad Anti-Inflammatory Actions. *J. Med. Food* 2005, 8 (2), 125–132.
30. Daily, J. W.; Yang, M.; Park, S. Efficacy of Ginger for Alleviating the Symptoms of Primary Osteoarthritis. *Osteoarthritis Cartilage* 2000, 8 (9), 567–572.
31. Altman, R. D.; Marcussen, K. C. Effects of a Ginger Extract on Knee Pain in Patients with Osteoarthritis. *Arthritis Rheum.* 2001, 44 (11), 2531–2538.
32. Sruthi, C. V.; Sindhu, A. A Comparison of the Antioxidant Property of Five Ayurvedic Formulations Commonly Used in the Management of Vata Vyadhis. *J. Ayurveda Integr. Med.* 2012, 3, 29–32.

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