



## DIAGNOSTIC APPROACH TO SANDHIVATA (OSTEOARTHRITIS)

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### ABSTRACT

Sandhivata, commonly equated with osteoarthritis, is classified as a Vata vyādhi affecting the joints (sandhis) in Ayurvedic medicine. A thorough understanding of its diagnosis requires collating classical descriptions of nidāna (etiology), samprāpti (pathogenesis), and lakṣaṇa (clinical features), along with differential diagnosis (vyavacchedaka nidāna) and the sāmā/nirāma vāta classification. This review analyzes authoritative texts (Caraka, Suśruta, Mādhava) and relevant studies to outline these aspects. Classical śloka note that aggravated Vāta in joints causes swelling and pain: “वातपूर्णद्विस्पर्शः शोथः संधिगतेऽनिले प्रसारणाकुञ्चनयोः प्रवृत्तिश्च सवेदना” [1]. Key etiological factors include excessive exertion, trauma, and tissue depletion. Clinical signs (e.g. joint śoṭha, crepitus, and śūla) are corroborated by both Caraka and Suśruta [1][2]. Differentially, Sandhivata must be distinguished from traumas (upaghāta vata), Amavāta (rheumatoid arthritis), and reactive osteoarthritis [3]. Assessment of sāmā (with āma) vs. nirāma (without āma) Vāta is emphasized for guiding management [4]. This integrated diagnostic framework bridges classical and modern understanding of joint degeneration.

**KEY WORDS** – Sandhivata, Osteoarthritis, Diagnostic Approach, Pareeksha

### INTRODUCTION

Sandhivāta (“sandhi” = joint, “vāta” = Vata Dosha) corresponds to the modern concept of osteoarthritis, a degenerative joint disorder. It is regarded in Ayurveda as a Vāta- predominated articular disease (vāta-vyādhi) arising mainly in old age (vṛddhāvasthā) due to dhātu-kṣhaya (tissue depletion) [5]. Caraka and Suśruta identify Sandhigata Vāta under vata vyādhi, noting that in vṛddhāvastha all dhātus decline, predisposing to vātaprakopa [5]. Pain (śūla) is the cardinal symptom, often accompanied by localized swelling (śoṭha) and a characteristic “air-filled” sensation (vāta-pūrṇa dṛuti-sparśa) on joint palpation [6][1]. For example, Caraka states: “vāta-pūrṇa dṛuti-sparśaḥ śoṭhāḥ samdhigate ’nile prasāraṇa-akuñcana-yoḥ pravṛttiś ca svedanā” [1] (an aggravated Vata in joints causes joints to feel full of air and swollen, with pain on movement). As in modern osteoarthritis, weight-bearing joints (especially the knee) are most affected [7].

The aim of this study is to consolidate classical diagnostic criteria for Sandhivāta – including nidāna, samprāpti, lakṣaṇa, differential diagnosis (vyavacchedaka nidāna), and sāmā/nirāma vāta assessment – using Ayurvedic classics and recent literature. The findings should aid clinicians in distinguishing Sandhivāta from other arthritic conditions and in guiding appropriate Ayurvedic interventions.

### MATERIALS AND METHODS

This review surveyed classical Ayurvedic texts (including Caraka Saṃhitā Chikitsā Sthāna and Suśruta Saṃhitā Nidāna Sthāna) and compendia (e.g. Mādhava Nidāna 22nd Adhyāya) for descriptions of Sandhivāta. Authoritative English translations and commentaries were consulted via digital editions [1][2][8]. Additionally, relevant peer-reviewed studies on Sandhigata vāta and osteoarthritis were examined. Key diagnostic features were extracted and organized according to nidāna, samprāpti, lakṣaṇa, vyavacchedaka nidāna, and sāmā/nirāma vāta classification. Sanskrit ślokas from the classics were quoted where appropriate, with translations and sources noted.

### Observations and Results

- Nidāna (Etiological Factors): Classical sources list multiple causative factors for Sandhigata vāta. Āchārya Mādhava enumerates excessive physical activities (e.g. jumping, swimming, long journeys on foot) and trauma (falls, marma-āghāta, riding on elephants/camels/horse) [8]. Similarly, vāta-vyādhi-nidāna includes atyavayāma (over-exertion), ātapa (excess heat), vyāyāma (exercise), and marma-ākṣhāta (injury to vital points) [8]. Psychological stressors such as chronic worry, grief, and anger (chintā, śoka, krodha) are also implicated [8]. Dietary and lifestyle nidānas include



intake of dry, cold, light, or scanty food (*rūkṣha-śīta-laghu-alambhana*) and erratic eating (*abhojana*)[8]. Age-related dhātu-kṣhaya (e.g. old age or chronic illness) is a key nidāna: “*Vṛddhāvasthāte dhātu-kṣheyāt vṛddhiḥ vātaṃ kṛtvā vyūpacyate*” (in old age, Vāta increases due to tissue depletion)[5]. In summary, causes of Sandhivāta include:

- Heavy exertion and trauma (e.g. *marma-āghāta*, vehicle/animal accidents)[8].
- Kapha-vṛddhi factors (excessive cold, sedentary habits leading to occlusion of Vāta channels).
- Depletive factors (chronic disease, fasting, excessive laxative therapies) causing dhātu-kṣhaya.
- Psychosocial stress (fear, grief, anger).
- Improper treatments (e.g. incompatible medicines or purificatory procedures) acting as *avarāṇa-nidāna*. These nidānas agree with modern risk factors for osteoarthritis (e.g. repetitive stress, injury, age)[7].
- Saṃprāpti (Pathogenesis): Under these etiologies, Vāta becomes aggravated (*saṃchaya* and *prakopa*), drying up the channels (*margaśūnya*) and locomotor tissues. The aggravated Vāta then lodges in *sandhīs* (joint spaces), gradually destroying bone (*asthi*) and ligament (*snāyu*) integrity[2]. Sushruta’s Nidāna chapter describes this as: “*hanti saṃdhigataḥ saṃdhīn śūla-śophaśapau karoti ca*”[2]. That is, the deranged Vāta “destroys the joint, producing pain (*śūla*) and swelling (*shopha*)”. The Śleṣma (Kapha) and Rakta (blood) dhātus may initially increase (causing mild inflammation), but progressive *śoṣhana* (drying/atrophy) of *asthi* and *majjā* leads to degeneration[2]. Channels involved are predominantly *asthi-majjā-vaḥ srotas* (bone and marrow channels), consistent with osteoarthritic pathology[9][2]. Thus, Sandhivāta saṃprāpti involves *dhātu-kṣhaya* and *mārga-āvaraṇa*, ultimately manifesting in joint degeneration and restricted mobility[10][2].
- Lakṣaṇa (Clinical Features): Classical texts enumerate Sandhivāta lakṣaṇas as joint pain and swelling aggravated by movement. Caraka (Chikitsā 28/37) vividly describes the afflicted joints: “*vāta-pūrṇa dṛuti-sparśaḥ śoṭhāḥ saṃdhigate ’nile / prasāraṇa-akuñcana-yoḥ pravṛttiś ca svedanā*”[1], meaning “the joint feels filled with air on palpation (*vāta-pūrṇa dṛuti-sparśa*), becomes swollen (*śoṭhā*), and pain (*vedana*) arises on both extension and flexion movements.” Sushruta (Nidāna 1/28) similarly notes that Vāta in joints causes pain (*śūla*) and inflammation: “*śūla-śophasya*”[2]. Key clinical features include:
  - Swelling (Śoṭha): Soft edema of joints, often with a full, boggy feel (capturing *vāta-pūrṇa* quality)[1].
  - Pain (Śūla): Dull or piercing arthritic pain, especially on bending or straining the joint (Caraka notes pain on flexion/extension[1]).
  - Stiffness (Stambha): Rigidity and limited range of motion, particularly after rest or in morning hours (an expected Vāta feature).

- Crepitus/Creptant Sound: Grinding sensation or sound in joint due to roughened articular surfaces (akin to *dṛuti-sparśa*).
- Absence of systemic fever: Typically no high fever or severe systemic signs (differentiating from inflammatory arthropathies).
- Other Vāta symptoms: Dry skin over joints, and aggravation by cold/dry weather or fasting (consistent with Vāta-dominance). Together, these resemble degenerative osteoarthritis symptoms, corroborating the classical sarcana.
- Vyavacchedaka Nidāna (Differential Diagnosis): Ayurvedic diagnosis emphasizes distinguishing Sandhivāta from similar conditions. The main differentials include:
  - Upaghātaja Vāta: Joint pain secondary to trauma or injury. Unlike Sandhivāta (慢慢 विकास), Upaghātaja has an acute onset linked to a specific trauma.
  - Amavāta: Corresponding to rheumatoid arthritis, characterized by marked inflammation, systemic features, and involvement of *āma*. Amavāta often involves multiple symmetric joints and significant morning stiffness.
  - Reactive/Secondary Osteoarthritis: Arthralgia following localized infection or injury (could overlap with upaghāta category).
  - Vātāvaraṇa Śāliṅga (Vātarakta): Gout-like presentations with burning pain and redness in a joint (Sandhivāta typically lacks such burning and acute red inflammation). A slide summary (Fig. 1) lists Sandhigata Vāta, Upaghātaja Vāta, Amavāta, and Reactive Osteoarthritis as key vyavacchedaka nidānas[3]. Clinically, Sandhivāta is differentiated by its chronic course, predominant Vāta features (dryness, cracking sensation), and minimal *āma* or pitta symptoms. Amavāta, by contrast, shows prominent swelling, heat, and systemic malaise.

Sāma/Nirāma Vāta Assessment: Prior to treatment, classical diagnostics require assessing whether the Vāta is *sāma* (with *āma*) or *nirāma* (digestively clean). When *āma* (toxins from indigestion) is present with aggravated Vāta, the condition is termed Sama Vāta[4]. In contrast, Nirāma Vāta denotes Vāta-pathology without ama, which is typical in Sandhivāta because joint degeneration is mainly a dry (*rūkṣha*) process. Āchārya Raghavendra Śarmā explains that “When Vāta is associated with Āma it is called Sāma Vāta; when Āma is digested away it becomes Nirāma Vāta”[4]. In clinical terms, signs of *āma* (e.g. heaviness, anorexia, coated tongue) would suggest Sama stage, requiring digestive therapy first, whereas a purely degenerative joint picture indicates Nirāma stage. In Sandhivāta, the lack of systemic āma symptoms typically classifies it as Nirāma Vāta, focusing treatment on Vāta-nuloman and dhātu-sanshodhana.

## DISCUSSION

The Ayurvedic diagnostic framework for Sandhivāta underscores that joint degeneration is fundamentally a Vāta disorder, complicated by age-related dhātu depletion and occasional occlusion of channels (*avarāṇa*). Contemporary studies agree that



osteoarthritis prevalence rises in middle to older age (Madhyama Vaya and Vrddha)[5]. For instance, Akhtar et al. note Sandhigata's onset around age 40 with dominant Vāta symptoms[5], mirroring the epidemiology of modern osteoarthritis. The classical emphasis on *sūla* and *śoṭha* aligns with observed pain and minimal swelling in idiopathic OA. However, unlike rheumatoid arthritis (Amavāta), Sandhivāta typically lacks significant *āma* accumulation; hence, treatments differ (deepana/pāchana therapies for Amavāta vs. *vata-nulomana*, *śodhana* for Sandhivāta).

Differential diagnosis (vyavacchedaka nidāna) has practical implications. Identifying Upaghātaja Vāta means treating inflammation post-injury, whereas a pure degenerative case (Sandhivāta) would focus on strengthening and lubrication. Likewise, excluding Vātarakta (gout) or other Vāta-śāliṅga ensures the correct disease model is applied. The slide (Fig. 1) shows that Ayurveda recognizes “reactive osteoarthritis” as a separate entity, acknowledging modern correlation under Ayurvedic nomenclature.

Assessing *sāma* vs. *nirāma* Vāta is critical: if an Ayurveda practitioner mistakenly treats a Sama Vāta case with aggressive Vāta-pacifying therapies, the underlying *āma* might be ignored, leading to suboptimal results. Conversely, mistaking Nirāma Vāta for Sama could delay necessary Vāta-targeted interventions. Thus, the absence of *āma* in Sandhivāta implies management should include Vata-relieving snehana (oily therapies), swedana (sudation), and Basti (medicated enema) as first-line, often guided by classical protocols[4].

In sum, the integrated diagnostic approach – combining nidāna-pancaka (etiology, pathogenesis, etc.) with clinical examination – allows an Ayurvedic clinician to characterize Sandhigata Vāta fully. This ensures holistic treatment planning. For example, identifying that Kapha-occlusion (e.g. due to sedentary lifestyle) is minimal in Sandhivāta directs therapy towards deepana (digestives) only if mild *āma* is present, rather than Kapha-expelling measures. The classical dictum “*vata-vātaraṇaṃ śāmyet*” (treat Vāta by balancing its aggravators) serves as a reminder that diagnosis dictates treatment.

## CONCLUSION

The Ayurvedic diagnostic model for Sandhivāta provides a detailed, multi-faceted understanding of osteoarthritis. By systematically evaluating nidāna (causes), samprāpti (pathogenesis), and lakṣaṇa (symptoms), and by distinguishing Sandhivāta from similar conditions (vyavacchedaka nidāna), clinicians can formulate targeted management strategies. Key diagnostic clues – chronic joint pain with minimal inflammation, on a background of aging or trauma, and a predominantly Vāta profile – distinguish Sandhivāta. Moreover, assessing the *sāma/nirāma* state ensures that treatment addresses any coexisting *āma* before Vāta therapies. This comprehensive approach, rooted in classical texts, remains relevant for modern practitioners, bridging ancient wisdom and contemporary arthritic

care. Future research may further elucidate these diagnostic criteria in light of modern imaging and biomarkers, but the classical framework offers a valuable, patient-centered perspective.

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