



A CONCEPTUAL STUDY OF *Majjā-kṣaya* in *Bṛhatrayī* WITH SPECIAL REFERENCE TO “*Śrīyante eva ca asthīni-Asthi-sauṣīrya* (Osteoporosis)” –A REVIEW ARTICLE

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ABSTRACT

Background:

Majjā-dhātu is one of the seven fundamental *dhātus* described in *Ayurveda* and plays a crucial role in nourishing *asthi-dhātu*, filling the cavities of bones (*asthi-sandhi pūraṇa*), and maintaining *bala*, *sneha*, and *ojas*. Depletion of *majjā-dhātu* (*majjā-kṣaya*) is described in classical *Ayurvedic* literature with characteristic *lakṣaṇas*. Among these, the expression “*śrīyante eva ca asthīni*” denotes *asthi-sauṣīrya* (porosity of bones). Although *Majjā-kṣaya* is not described as an independent disease entity, its conceptual understanding is essential for interpreting chronic degenerative and *vāta*-dominant disorders.

Objective:

To review and analyze the concept of *Majjā-kṣaya* described in *Bṛhatrayī* with special emphasis on the classical reference *śrīyante eva ca asthīni* and to comparatively evaluate the viewpoints of *Caraka*, *Suśruta*, and *Vāgbhaṭa*.

Materials and Methods:

A classical literary review was conducted using the authoritative *Ayurvedic* texts *Caraka Saṃhitā*, *Suśruta Saṃhitā*, and *Aṣṭāṅga Hṛdaya* along with their classical commentaries. Relevant references concerning *majjā-dhātu*, *dhātu-kṣaya*, and *asthi-majjā* relationship were collected and critically analyzed.

Results:

Majjā-kṣaya manifests with features such as *asthi-sauṣīrya*, *sandhi-śūnyatā*, *bhrama*, *tama*, *daurbalya*, and *vāta-prakopa*. Comparative analysis reveals that *Caraka* emphasizes neurological manifestations, *Suśruta* highlights structural degeneration of bones, while *Vāgbhaṭa* provides a concise causal statement directly linking *majjā-kṣaya* with *asthi-sauṣīrya*.

Conclusion:

Majjā-kṣaya represents a significant degenerative pathological condition affecting bone and marrow tissues. The classical concept of *asthi-sauṣīrya* described in *Bṛhatrayī* offers valuable insight into degenerative skeletal disorders and provides a holistic *Ayurvedic* framework for understanding and managing such conditions.

KEYWORDS: *Majjā-kṣaya*, *Asthi-sauṣīrya*, *Śrīyante eva ca asthīni*, *Bṛhatrayī*, *Dhātu-kṣaya*

INTRODUCTION

Ayurveda conceptualizes the human body as a balanced state of *doṣa*, *dhātu*, and *mala*, which together maintain physiological equilibrium and health¹. Among these, the *sapta dhātus* form the structural foundation of the body and are responsible for sustaining life through sequential nourishment described by the principle of *uttarottara dhātu sārva*².

Among the *dhātus*, *majjā dhātu* occupies a unique position due to its intimate anatomical and functional association with *asthi dhātu*. Classical *Ayurvedic* texts describe that *majjā* fills the cavities of bones and contributes to the maintenance of strength, lubrication, and vitality of the body³.

The relationship between *asthi* and *majjā* is further explained through the doctrine of *āśraya-āśrayī bhāva*, which states that *vāta doṣa* predominantly resides in *asthi dhātu* and influences the formation and nourishment of *majjā dhātu*⁴.

Therefore, disturbances affecting *asthi* inevitably influence *majjā*, leading to progressive tissue depletion.

The depletion of *majjā dhātu*, known as *majjā-kṣaya*, is described in the classical texts with characteristic symptoms such as *asthi-sauṣīrya*, *sandhi-śūnyatā*, *bhrama*, and *daurbalya*. A significant reference provided by *Vāgbhaṭa* is the aphorism:

“श्रीयन्ते एव चास्थीनि”

(*Aṣṭāṅga Hṛdaya*, *Sūtrasthāna 11/19*)

This statement denotes weakening and porosity of bones due to *majjā* depletion. In the present era, where degenerative skeletal disorders are increasingly prevalent, understanding the classical concept of *majjā-kṣaya* assumes considerable clinical and academic importance.



Concept of Majjā Dhātu in Bṛhatrayī

Formation of Majjā Dhātu

According to Ayurvedic physiology, *majjā dhātu* is formed from *asthi dhātu* through *dhātvāgni pāka*. The sequential transformation of *dhātus* is mentioned in *Caraka Saṃhitā*:

“अस्थो मज्जा”

(*Caraka Saṃhitā*, *Cikitsāsthāna* 15/17)

This statement signifies that *majjā* originates from *asthi dhātu* as part of the *dhātu-parināma* process.

Suśruta's View

Suśruta emphasizes the anatomical role of *majjā dhātu* and describes it as the tissue filling the cavities of bones:

“अस्थनां मध्ये मज्जा पूरयति”

(*Suśruta Saṃhitā*, *Sūtrasthāna* 15/17)

This description indicates the structural importance of *majjā* in maintaining skeletal stability and strength.

Functions of Majjā Dhātu

Classical Ayurvedic texts attribute several important functions to *majjā dhātu*:

- *Asthi pūraṇa* – filling bone cavities
- *Sneha utpatti* – providing unctuousness and lubrication
- *Bala vardhana* – maintaining strength and vitality
- *Netra snigdhatā* – maintaining ocular lubrication
- *Ojas poṣaṇa* – supporting immunity and vitality⁵

These functions demonstrate that *majjā dhātu* contributes both to structural integrity and systemic physiological stability.

Majjā-kṣaya: Classical Description

Majjā-kṣaya is described in classical texts under *dhātu-kṣaya lakṣaṇas*, though each treatise highlights different aspects of the condition.

Lakṣaṇa	Ayurvedic Meaning	Possible Modern Correlation
<i>Asthi-sauṣīrya</i>	Porosity and fragility of bones	Osteoporosis / reduced bone density
<i>Sandhi-sūnyatā</i>	Feeling of emptiness or instability in joints	Degenerative joint disorders
<i>Bhrama</i>	Dizziness or giddiness	Neurological weakness / vertigo
<i>Tama darśana</i>	Darkness before eyes	Circulatory or neurological disturbances
<i>Daurbalya</i>	General weakness	Systemic tissue depletion

These features indicate progressive degeneration of bone and marrow tissues.

Comparative Description of Majjā-kṣaya in Bṛhatrayī

Classical Text	Reference (Sthāna/Adhyāya)	Lakṣaṇas of Majjā-kṣaya	Interpretation
Caraka Saṃhitā	Cikitsāsthāna 15	<i>Bhrama</i> , <i>Tama darśana</i> , <i>Daurbalya</i> , <i>Asthi-sauṣīrya</i>	Indicates neurological involvement such as dizziness and darkness before eyes along with weakness and bone degeneration.
Suśruta Saṃhitā	Sūtrasthāna 15	<i>Asthi-sauṣīrya</i> , <i>Sandhi-sūnyatā</i> , <i>Asthi-daurlabhya</i> (weakness of bones)	Emphasizes structural deterioration of bones and emptiness of joints due to depletion of marrow.
Aṣṭāṅga Hṛdaya	Sūtrasthāna 11	“Śrīyante eva ca asthīni”	Concise aphorism indicating loosening and porosity of bones as a hallmark of <i>majjā-kṣaya</i> .

This comparison indicates that the classical texts provide complementary perspectives combining functional, structural, and causal explanations.

Samprāpti of Majjā-kṣaya

Nidāna

The etiological factors responsible for *majjā* depletion include:

- *Ati-vyāyāma* (excessive physical exertion)
- *Ati-laṅghana* (excessive fasting)
- *Rūkṣa āhāra* (dry and non-unctuous diet)
- *Vāta-vardhaka vihāra* (lifestyle practices aggravating *vāta*)

Pathogenesis

Due to the principle of *āśraya-āśrayī bhāva*, disturbances affecting *asthi dhātu* impair the formation and nourishment of *majjā dhātu*. Progressive depletion results in bone porosity, joint instability, and neurological manifestations⁶.

Clinical Significance

From a contemporary viewpoint, the manifestations of *majjā-kṣaya* may be correlated with several conditions such as:

- Osteoporosis and osteopenia
- Degenerative joint diseases
- Bone marrow insufficiency
- Chronic *vāta*-dominant degenerative disorders⁷

Early recognition of *majjā-kṣaya* enables timely intervention through *vāta-śamana*, *bṛṃhana*, *snehana*, and *rasāyana therapies*, which help restore tissue balance and prevent progression of skeletal degeneration⁸.

DISCUSSION

Majjā-kṣaya represents a progressive degenerative condition involving both structural and functional impairment of tissues. The doctrine of *āśraya-āśrayī bhāva* explains the close relationship between *asthi* and *majjā dhātus*, resulting in mutual influence during pathological states.

Caraka emphasizes neurological manifestations associated with *majjā* depletion, whereas *Suśruta* focuses on structural degeneration of bone cavities. *Vāgbhaṭa* integrates these viewpoints through a concise description linking *majjā-kṣaya* directly with *asthi* degeneration.⁹

This integrated perspective highlights the depth of Ayurvedic understanding regarding degenerative skeletal disorders.

CONCLUSION

Majjā-kṣaya represents an important pathological condition described in classical Ayurvedic literature,



particularly within the texts of *Bṛhatrayā*. The concept highlights the progressive depletion of *majjā dhātu* and its close association with *asthi dhātu*. The classical aphorism “*śrīyante eva ca asthīni*” clearly indicates the development of *asthi-sauśīrya*, or porosity of bones, resulting from *majjā* depletion. This observation reflects a sophisticated understanding of skeletal degeneration within the Ayurvedic framework.

Comparative analysis of the classical treatises reveals complementary perspectives. Caraka emphasizes functional and neurological manifestations such as *bhrama*, *tama*, and *daurbalya*. *Suśruta* focuses on structural aspects, describing the anatomical role of *majjā* within bone cavities and the resulting weakness when it is depleted. *Vāgbhaṭa* synthesizes these views into a concise causal statement linking *majjā-kṣaya* with degeneration of bones.

From a modern perspective¹⁰, the concept of *asthi-sauśīrya* may be correlated with degenerative skeletal disorders such as osteoporosis. Ayurveda, however, interprets these changes through the interaction of *doṣa*, *dhātu*, and *agni*, offering a holistic explanation of pathology. Early identification of *majjā-kṣaya* and appropriate management through *vāta-śamana*, *br̥mhaṇa*, and *rasāyana* therapies can help prevent progressive skeletal degeneration and maintain structural integrity of the body.

CONFLICT OF INTEREST: NIL

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