

Netra Śarīra in Ayurveda: A Critical Review and Contemporary Anatomical Interpretation

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Abstract

Netra (eye) is an important Jñānendriya and occupies a significant position in Ayurveda, particularly in Śālākya Tantra. The Suśruta Saṃhitā describes ocular anatomy through the concepts of Maṇḍala, Sandhi, Paṭala, Sira, Peśī, Dṛṣṭi and Netra Marma. These concepts represent a distinctive approach to understanding ocular structure and function.

This narrative review examines the classical description of Netra Śarīra and explores its possible correlation with contemporary ophthalmic anatomy. The five Maṇḍalas provide a regional description of the eye, while six Sandhis represent important anatomical junctions. The six Paṭalas describe a layered concept, although their exact correlation with modern ocular tissues remains uncertain. Dṛṣṭi appears to have both structural and functional significance and should not be equated with a single modern anatomical structure.

The review concludes that some Ayurvedic ocular concepts show plausible anatomical correlations, whereas others remain interpretative. Therefore, Ayurvedic–modern anatomical correlations should be proposed cautiously and supported by textual and anatomical evidence.

Keywords

Netra Śārīra, Ayurveda, Suśruta Saṃhitā, Maṇḍala, Sandhi, Paṭala, Dr̥ṣṭi, ocular anatomy.

1. Introduction

The eye is a specialised sensory organ responsible for visual perception. Ayurveda discusses Netra extensively under Śālākya Tantra, with the Suśruta Saṃhitā providing a systematic description of its structure, function and disorders.

Unlike modern anatomy, Ayurvedic ocular anatomy is described using concepts such as Maṇḍala, Sandhi and Paṭala. These concepts provide regional, junctional and layered perspectives of ocular anatomy. The present review critically examines these concepts and their possible contemporary interpretation.

2. Materials and Methods

A narrative review was conducted using the Suśruta Saṃhitā and relevant published literature on Netra Śārīra and its modern anatomical interpretation. Classical concepts including Maṇḍala, Sandhi, Paṭala and Dr̥ṣṭi were compared with contemporary ophthalmic anatomy. Correlations were classified as relatively plausible or uncertain according to available textual and anatomical evidence.

3. Classical Concept and Contemporary Correlation

Maṇḍala

Suśruta describes five Maṇḍalas:

1. Pakṣma Maṇḍala – eyelashes and eyelid margin
2. Vartma Maṇḍala – eyelid region
3. Śukla Maṇḍala – white region of the eye
4. Kṛṣṇa Maṇḍala – dark/coloured ocular region
5. Dr̥ṣṭi Maṇḍala – region associated with vision

Pakṣma and Vartma show relatively close anatomical correspondence with eyelashes and eyelids. Śukla may broadly relate to the scleral-conjunctival region. The exact modern equivalents of Kṛṣṇa and Dr̥ṣṭi remain uncertain.

Sandhi

Six Sandhis are described in relation to the ocular regions. They represent junctional or transitional areas, including medial and lateral canthal regions. Their concept may be compared with anatomical transitions such as the eyelid margin and corneoscleral region, although direct one-to-one equivalence should be avoided.

Paṭala

Six Paṭalas are described in classical ocular anatomy. Various authors have correlated them with different ocular layers or structures, including the cornea, lens, vitreous and retina. However, these interpretations are inconsistent. Hence, Paṭala is better regarded as a classical layered or depth-oriented anatomical concept rather than a definitive equivalent of specific modern histological layers.

Dr̥ṣṭi and Netra Marma

Dr̥ṣṭi has both anatomical and functional significance. Modern vision involves the coordinated function of the cornea, lens, retina, optic nerve and visual pathways; therefore, Dr̥ṣṭi cannot be conclusively identified with a single modern structure.

The concept of Netra Marma highlights the vital functional importance of the eye and the serious consequences of ocular injury, showing a meaningful conceptual relationship with contemporary clinical anatomy.

4. Discussion

Netra Śārīra demonstrates a systematic Ayurvedic approach to ocular anatomy through regional, junctional, layered and functional concepts. While certain terms such as Pakṣma and Vartma permit relatively straightforward anatomical interpretation, concepts such as Paṭala and Dr̥ṣṭi remain debatable.

Differences between Ayurvedic conceptual anatomy and modern gross anatomy and histology

make direct one-to-one correlation inappropriate in several instances. Therefore, similarities should be described as proposed correlations rather than established anatomical equivalences.

Further research integrating classical Sanskrit texts, commentaries, modern anatomy, histology and ophthalmic imaging may help clarify these relationships.

5. Conclusion

Netra Śarīra represents an important and systematic component of Ayurvedic anatomy. The concepts of Maṇḍala, Sandhi, Paṭala, Sira, Peśī and Dṛṣṭi demonstrate an integrated understanding of ocular structure and function.

Some concepts have plausible contemporary anatomical parallels, whereas others remain uncertain. A cautious, evidence-based approach is therefore essential while interpreting Ayurvedic ocular anatomy in the context of modern ophthalmology.

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