

Role of Agni And Dhatu Poshan in Female Reproductive Health: A Conceptual Correlation With AMH

Dr. Ruchita S. Chide¹, Dr. Abhijit Chitnis²

¹P.G. Scholar, Department of Kriya Sharir, MAM's Sumatibhai Shah Ayurved Mahavidyalaya, Hadapsar, Pune

²Guide, Asso. Professor, Department of Kriya Sharir, MAM's Sumatibhai Shah Ayurved Mahavidyalaya, Hadapsar, Pune

Abstract

Female reproductive health depends upon proper nutrition, metabolism, tissue nourishment and coordinated endocrine function. Ayurveda explains these processes through the fundamental concepts of Agni, Ahara Rasa, Dhatu Poshan, Artava and Artavavaha Srotas. According to Ayurveda, proper digestion and metabolism are essential for the formation and nourishment of Dhatu.

In modern physiology, Anti-Müllerian Hormone (AMH) is produced mainly by granulosa cells of small growing ovarian follicles. Serum AMH reflects the number of growing follicles and is therefore widely used as a marker of functional ovarian reserve.

The present conceptual review attempts to understand the possible relationship between Agni, Dhatu Poshan, Artava and AMH from an Ayurvedic–physiological perspective. Proper Jatharagni leads to appropriate formation of Ahara Rasa, which subsequently participates in sequential Dhatu nourishment. Healthy tissue metabolism may be considered an important physiological background for normal reproductive function. Artava represents an important concept in female reproductive physiology, while AMH provides a measurable modern biomarker related to the follicular pool.

However, AMH cannot be considered directly equivalent to Artava, Shukra, Ojas or any single Ayurvedic entity. The proposed relationship is therefore a conceptual correlation rather than a direct equivalence.

Keywords: Agni, Dhatu Poshan, Artava, Artavavaha Srotas, AMH, ovarian reserve, Kriya Sharir, female reproductive health.

1. Introduction

Female reproductive physiology is a complex process involving nutrition, metabolism, tissue development, ovarian follicular growth and hormonal regulation.

Ayurveda gives importance to Agni as the fundamental factor responsible for digestion and transformation. Proper digestion produces properly formed Ahara Rasa, which participates in the nourishment of different Dhatu.

The Ayurvedic concept can therefore be understood broadly as:

Ahara → Agni → Ahara Rasa → Dhatu Poshan → Artava → Reproductive function

Modern physiology describes ovarian function through follicular development and the hypothalamic–pituitary–ovarian axis. Among the biomarkers used in modern reproductive medicine, Anti-Müllerian Hormone (AMH) has an important role in assessment of functional ovarian reserve.

AMH is produced by granulosa cells of small growing follicles, and circulating AMH correlates with the number of growing follicles.

Therefore, understanding the Ayurvedic principles of Agni and Dhatu Poshan may provide an interesting conceptual framework for discussing female reproductive physiology in relation to AMH.

2. Concept of Agni

Agni is one of the most important physiological concepts in Ayurveda.

Agni is responsible for:

- Digestion
- Transformation
- Assimilation
- Metabolism
- Tissue nourishment

Ayurveda describes 13 types of Agni:

1. **Jatharagni** - Responsible for the primary digestion of food.
2. **Bhutagni** - Five Bhutagni are involved in the transformation of Panchamahabhuta components.
3. **Dhatvagni** - Seven Dhatvagni are associated with metabolism and nourishment of the seven Dhatu.

Thus: Jatharagni → Bhutagni → Dhatvagni → Dhatu Poshan

The concept of Dhatvagni is particularly important because it explains how nutrients are transformed and utilized at the tissue level.

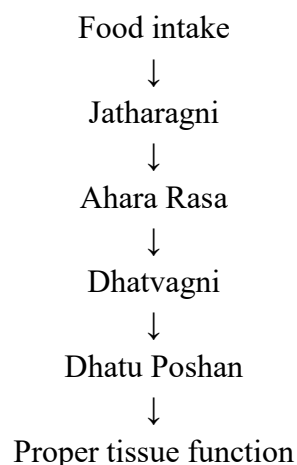
3. Concept of Dhatu Poshan

According to Ayurveda, food after digestion produces Ahara Rasa, which provides nourishment to the Dhatu.

The classical concept describes sequential nourishment:

Ahara → Ahara Rasa → Rasa → Rakta → Mamsa → Meda → Asthi → Majja → Shukra

The Dhatu are not simply anatomical structures; they have both structural and functional roles. Charaka describes the formation and nourishment of Dhatu from Ahara Rasa. The process may be represented as:



The Ayurvedic concept of Dhatu Poshan describes the transformation of nutrients and sequential nourishment of tissues.

4. Important Ayurvedic Concept of Agni

A commonly quoted verse describing the importance of Agni is:

आयुर्वर्णबलारोग्यम् उत्साहोपचयौ प्रभा ।

ओजस्तेजोऽग्नयः प्राणाश्चोक्ताः पञ्चदशाश्रयाः ॥

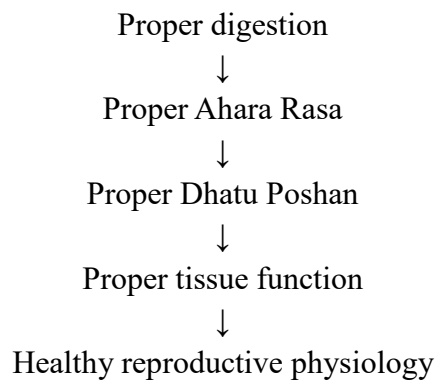
Reference: Charaka Samhita, Chikitsa Sthana 15

Meaning - Ayushya, Varna, Bala, Arogya, Utsaha, Upachaya, Prabha, Ojas, Tejas, Agni and Prana are dependent upon proper physiological functioning. This highlights the importance of Agni in maintaining overall physiological health.

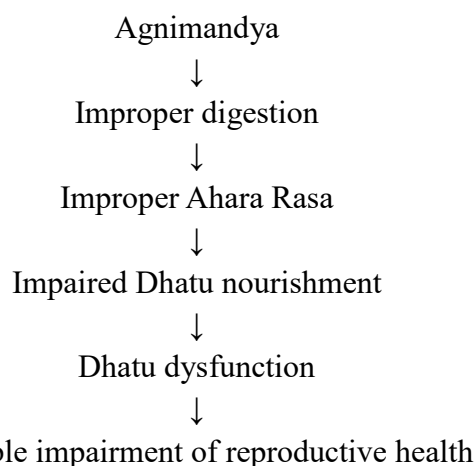
5. Agni and Dhatu Metabolism

The relationship can be understood as:

Normal Agni



Impaired Agni



This is an Ayurvedic physiological model, not a direct modern biochemical pathway.

6. Concept of Artava

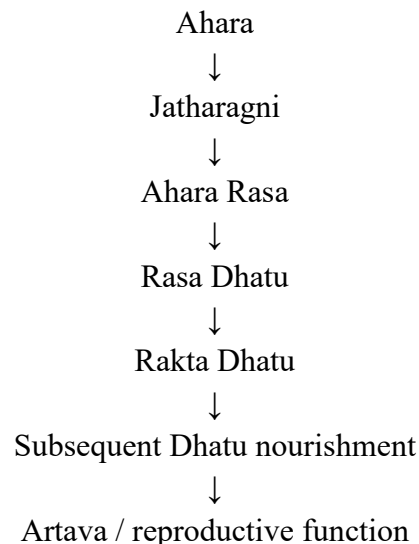
Artava is an important concept in female reproductive physiology. The term Artava is used in Ayurveda in different contexts and may refer to menstrual function and, in some contexts, the ovum/female

reproductive component. Therefore, while discussing AMH, Artava should not be restricted only to menstrual blood.

7. Artava and Dhatu Poshan

From an Ayurvedic perspective, proper tissue nourishment is important for maintaining reproductive function.

A simplified conceptual pathway is:



Recent Ayurvedic literature has also discussed the importance of Rasavaha Srotas and nutritional support in female reproductive health. However, the exact classical interpretation of Artava varies depending upon the context in which the term is used.

8. Artavavaha Srotas

Artavavaha Srotas is associated with the transport and functional expression of Artava.

Sushruta describes Artavavaha Srotas in the context of female reproductive physiology. The concept includes the relationship between reproductive organs, Artava and its physiological movement. The classical description should not be directly mapped onto a single modern anatomical structure because Ayurvedic descriptions and modern microscopic anatomy use different frameworks.

9. Modern Concept of AMH

Anti-Müllerian Hormone (AMH) is a glycoprotein hormone belonging to the transforming growth factor-beta family. In females, AMH is primarily produced by granulosa cells of small growing ovarian follicles. AMH production increases during follicular development and decreases as follicles undergo selection and maturation. Therefore:

Growing ovarian follicles → Granulosa cells → AMH production → Serum AMH

Serum AMH correlates with the number of growing follicles and is consequently used as a marker of functional ovarian reserve.

10. What is Ovarian Reserve?

Ovarian reserve refers broadly to the remaining reproductive potential of the ovary, particularly in relation to the quantity of follicles.

Modern assessment commonly uses:

- AMH
- Antral follicle count (AFC)
- FSH
- Ovarian volume and other clinical parameters

Among these, AMH has become an important biomarker because it reflects the population of growing follicles.

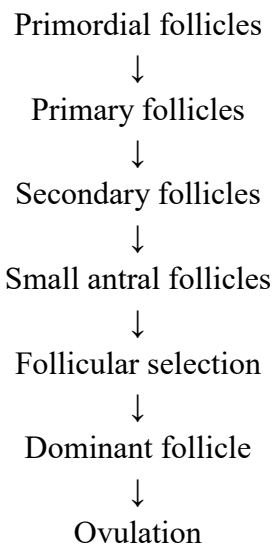
However: **AMH $\neq$ egg quality** and

AMH $\neq$ guaranteed fertility prediction

AMH has limitations in predicting ongoing pregnancy and should therefore be interpreted in the appropriate clinical context.

11. AMH and Folliculogenesis

The relationship can be represented as:

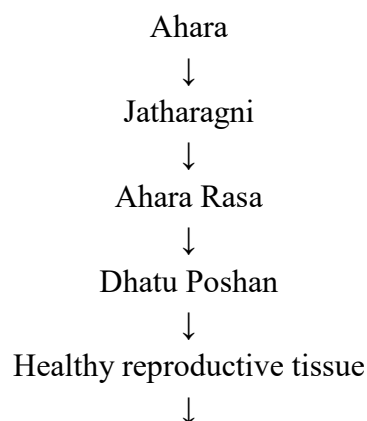


AMH is predominantly associated with the small growing follicle population. Thus: Number of growing follicles $\leftrightarrow$ AMH level

This makes AMH useful as a marker of functional ovarian reserve.

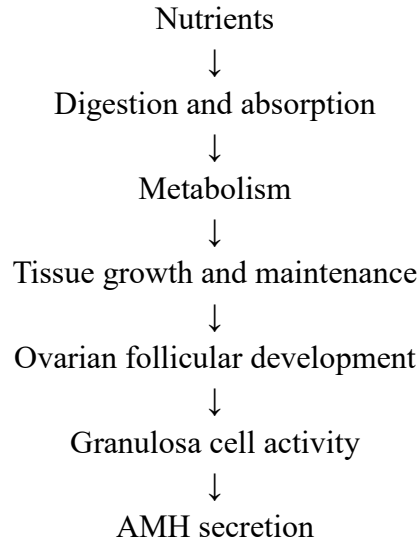
12. Conceptual Correlation Between Agni and AMH

Ayurvedic pathway



Artava / reproductive function

Modern pathway

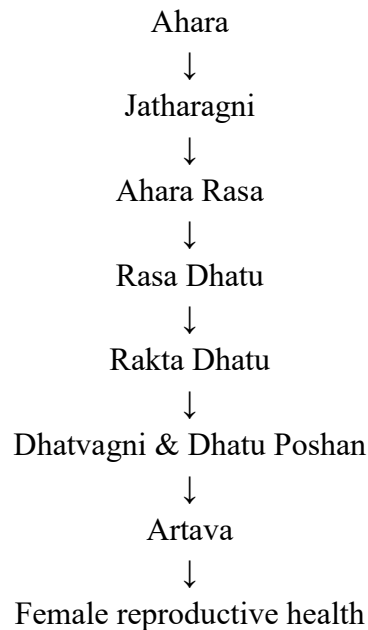


These pathways show a functional similarity at the conceptual level, but they should not be considered identical physiological mechanisms.

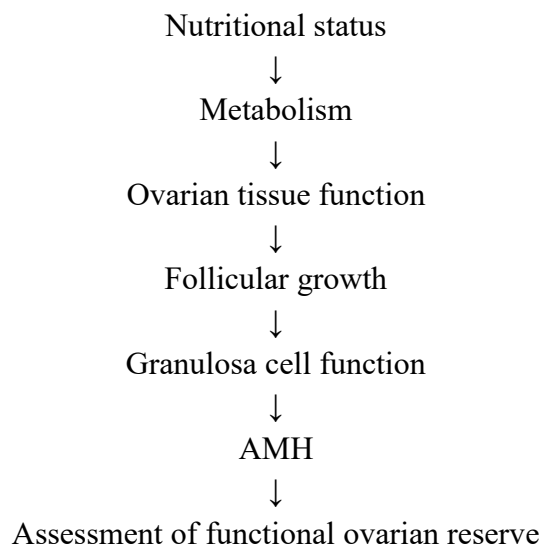
13. Ayurvedic–Modern Correlation Table

Ayurvedic concept	Modern physiological concept	Possible correlation
Agni	Digestion and metabolism	Transformation and utilization of nutrients
Ahara Rasa	Nutrient availability	Substrate for tissue nourishment
Dhatvagni	Cellular/tissue metabolism	Tissue-level utilization and transformation
Dhatu Poshan	Tissue nutrition and maintenance	Growth and functional maintenance
Artava	Female reproductive function	Functional reproductive system; not identical to AMH
Artavavaha Srotas	Reproductive pathways	Conceptual functional correlation
Garbhashaya	Uterus	Anatomical/functional correlation
Ovarian follicle	Reproductive follicular unit	Modern structural-functional unit
AMH	Biomarker of growing follicle pool	Indicator of functional ovarian reserve

14. Conceptual Ayurvedic perspective



Modern perspective



15. Role of Agni in Female Reproductive Health

From an Ayurvedic perspective, proper Agni is necessary for proper nourishment of the body.

If Agni is normal:

Samagni

- proper digestion
- proper nutrient transformation
- proper Dhatu Poshan
- proper physiological functions.

If Agni is impaired:

Mandagni

- impaired digestion
- improper nutrient transformation
- impaired Dhatu nourishment
- possible functional disturbance.

Therefore, Agni may be considered an important foundational physiological concept in maintaining reproductive health. It is important to state that this does not mean that Agni directly controls AMH secretion. Such a claim would require experimental evidence.

16. Dhatu Poshan and Ovarian Function

The ovary is a metabolically active reproductive organ.

Follicular development requires:

- Adequate energy
- Protein and micronutrients
- Cellular metabolism
- Hormonal regulation
- Adequate blood supply
- Proper granulosa-cell function

From an Ayurvedic perspective, these requirements can be conceptually discussed under:

Ahara → Agni → Rasa → Dhatu Poshan → reproductive function

Thus, Dhatu Poshan provides a useful Ayurvedic framework for understanding the importance of nutritional and metabolic status in reproductive physiology.

17. Possible Role of Rasavaha Srotas

Rasa Dhatu is closely associated with nourishment. The modern reproductive system requires continuous delivery of:

- Oxygen
- Glucose
- Amino acids
- Fatty acids
- Micronutrients
- Hormonal signals

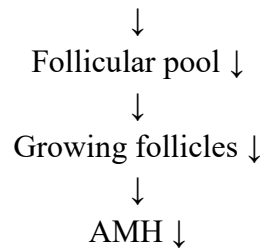
Therefore, Rasavaha Srotas and Rasa Dhatu can be conceptually discussed in relation to systemic nourishment and physiological support of reproductive tissues. However, Rasavaha Srotas should not be considered anatomically identical to the modern vascular system.

18. AMH and Age

AMH generally decreases with advancing age because the number of growing follicles decreases over time. The decline is related to depletion of the ovarian follicular pool.

At menopause, AMH generally becomes very low or undetectable. Thus:

Age ↑



The rate of decline varies between individuals, and AMH interpretation requires consideration of age and clinical context.

19. Factors Influencing Female Reproductive Health

From an Ayurvedic perspective:

- Ahara
- Agni
- Dinacharya
- Ritucharya
- Nidra
- Manasika factors
- Physical activity
- Dosha balance
- Dhatu Poshan

may all contribute to physiological well-being.

From a modern perspective:

- Age
- Genetics
- Ovarian pathology
- Endocrine disorders
- Metabolic health
- Lifestyle
- Certain medical treatments

can influence ovarian function and AMH.

Therefore, female reproductive health is multifactorial.

20. Discussion

Agni occupies a central position in Ayurvedic physiology. It is responsible for transformation and utilization of food, while Dhatvagni is described in relation to tissue-level metabolism. The Dhatu Poshan concept provides a systematic explanation of how nutrition is transformed and utilized by different tissues. Female reproductive health can therefore be discussed within this framework.

Artava is an important Ayurvedic concept associated with female reproductive physiology. Modern science, in contrast, provides measurable biomarkers such as AMH to assess aspects of ovarian function. AMH is produced by granulosa cells of small growing follicles and correlates with the number of growing follicles. Therefore, it is primarily a marker of functional ovarian reserve.

A conceptual relationship may therefore be proposed:

Agni → Ahara Rasa → Dhatu Poshan → reproductive tissue function → follicular development → AMH
However, this should be interpreted carefully.

There is currently no classical Ayurvedic statement identifying AMH with Artava or any specific Dhatu. Similarly, there is no established biochemical evidence showing that Agni directly determines serum AMH.

Therefore, the present correlation should be considered a hypothesis-generating Ayurvedic–modern physiological model, rather than a proven equivalence.

This distinction is important for a scientific PG dissertation or publication.

21. Conclusion

Agni and Dhatu Poshan are fundamental concepts in Ayurvedic physiology and provide a useful framework for understanding nutrition, metabolism and tissue function. Female reproductive physiology may be conceptually understood through the sequence:

Ahara → Agni → Ahara Rasa → Dhatu Poshan → Artava → Reproductive function

Modern physiology provides AMH as an important biomarker of the pool of growing ovarian follicles and functional ovarian reserve. A possible conceptual bridge may therefore be established between:

Agni → Dhatu Poshan → reproductive tissue health → follicular development → AMH
However, AMH should not be directly equated with Artava or any specific Ayurvedic Dhatu.

References

1. Charaka. Charaka Samhita. Chikitsa Sthana, Grahani Chikitsa, Adhyaya 15. Varanasi: Chaukhambha Orientalia.
2. Charaka. Charaka Samhita. Sutra Sthana, Vividhashitapitiya Adhyaya, 28. Varanasi: Chaukhambha Orientalia.
3. Sushruta. Sushruta Samhita. Sharira Sthana. Varanasi: Chaukhambha Sanskrit Sansthan.
4. Vagbhata. Ashtanga Hridaya. Sutra Sthana. Varanasi: Chaukhambha Prakashan
5. <https://www.carakasamhitaonline.com/index.php?title=Artava>
6. <https://www.ayurline.in/index.php/ayurline/article/view/1083>