



A Comprehensive Approach to Vandhyatva (Tubal Blockage): An Ayurvedic Perspective.

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Abstract

Tubal blockage is a significant contributor to female infertility. Though Ayurvedic texts do not explicitly describe fallopian tube pathology, the functional and anatomical correlation can be established through the concept of **Artavavaha Srotas**. Tubal blockage is interpreted as **Sanga**, a type of **Srotodushti** (obstruction of body channels), involving the **Vata**, **Pitta**, and **Kapha** Doshas. The classical Ayurvedic framework, outlined by Acharya Charaka, including Prakriti, Adhishtana, Linga, and Aayatana, provides a comprehensive understanding of this condition. This article integrates modern diagnostic insights with Ayurvedic principles and suggests therapeutic options like **Uttar Basti**, **Tridoshaghna herbs**, and **Srotoshodhana** measures to improve tubal function and enhance fertility outcomes.

Keywords: Vandhyatva, Tubal Blockage, Artavavaha Srotas, Infertility, Srotodushti, Uttar Basti

1. Introduction

Infertility is defined as the inability to conceive after 12 months of regular, unprotected intercourse. It affects approximately 10–15% of couples worldwide.¹ Among the various causes of female infertility, **tubal blockage** is responsible for nearly 25–35% of cases. The fallopian tubes play a crucial role in gamete transport and fertilization; thus, any obstruction hampers natural conception.

In Ayurveda, the structural counterparts of the fallopian tubes can be functionally mapped to **Artavavaha Srotas**. Though ancient texts do not provide a direct anatomical equivalent, the physiological role of these Srotas corresponds well with tubal function. Tubal blockage can therefore be interpreted as **Sanga**, one of the four types of **Srotodushti** mentioned in Ayurvedic literature.

¹ Eskandari N, Cadieux M. Infertility. In: DeCherney AH, Nathan L, editors. *Current Obstetric and Gynecologic Diagnosis and Treatment*. 9th ed. Lange Medical Books/McGraw-Hill; 2003. p. 979–90.

2. Modern Perspective of Tubal Blockage

2.1 Common Etiological Factors

Tubal blockage is most often the result of infection or inflammation:

- **Pelvic Inflammatory Disease (PID)**
- **Sexually Transmitted Infections:** *Chlamydia trachomatis*, *Neisseria gonorrhoeae* ²
- **Genital Tuberculosis**
- **Endometriosis**
- **Pelvic or abdominal surgery**
- **Congenital tubal anomalies**

2.2 Diagnostic Techniques

Diagnostic Method	Description
Hysterosalpingography (HSG)	X-ray with contrast dye to assess uterine and tubal anatomy ³
Sonohysterography (SHG)	Saline infusion to visualize the uterine cavity and tubal patency ⁴
HyCoSy	Hysterosalpingo-contrast sonography using ultrasound and air/saline mixture ⁵

² Strandell A, Bourne T, Bergh C, Granberg S, Asztely M, Torburn J. The assessment of endometrial pathology and tubal patency: a comparison between ultrasonography and X-ray hysterosalpingography for the investigation of infertility patients. *Ultrasound Obstet Gynecol.* 1999;14(3):200–4.

³ Cousineau TM, Domar AD. Psychological impact of infertility. *Best Pract Res Clin Obstet Gynaecol.* 2007;21(2):293–308.

⁴ Dijkman AB, Mol BW, Van der Veen F, Bossuyt PM, Hogerzeil HV. Can hysterosalpingocontrast sonography replace hysterosalpingography in the assessment of tubal subfertility? *Eur J Radiol.* 2000;35(1):44–8.

⁵ Cousineau TM, Domar AD. Psychological impact of infertility. *Best Pract Res Clin Obstet Gynaecol.* 2007;21(2):293–308.

Diagnostic Method	Description
Laparoscopy with Dye Test	Direct visualization of tubal patency through minimally invasive surgery ⁶
Hydrotubation	Older, now infrequently used technique with low accuracy

2.3-Pathophysiology of Tubal Blockage (Modern Perspective)

1. Epithelial Damage from Infection

- Recurrent infections (especially *Chlamydia trachomatis* and *Neisseria gonorrhoeae*) damage the tubal epithelium.
- Loss of ciliated cells disrupts gamete transport, leading to dysfunction or obstruction⁷.

2. Inflammation-Induced Fibrosis

- Chronic inflammation activates fibroblasts and promotes collagen deposition.
- This causes narrowing or closure of the tubal lumen⁸.

3. Hydrosalpinx Formation

- Blockage of the distal end of the fallopian tube leads to fluid accumulation (hydrosalpinx).
- The toxic fluid and distorted tubal anatomy interfere with fertilization and implantation⁹.

4. Salpingitis Isthmica Nodosa (SIN)

- A condition involving diverticular outpouchings in the isthmic region of the tube.

⁶ Strandell A, Bourne T, Bergh C, Granberg S, Asztely M, Torburn J. The assessment of endometrial pathology and tubal patency: a comparison between ultrasonography and X-ray hysterosalpingography for the investigation of infertility patients. *Ultrasound Obstet Gynecol*. 1999;14(3):200–4.

⁷ Wiesenfeld, H. C., & Sweet, R. L. (2011). Progress in the management of pelvic inflammatory disease. *Clinical Infectious Diseases*, 53(Suppl_3), S173–S176.

⁸ Rock, J. A., & Thompson, J. D. (2010). *Te Linde's Operative Gynecology* (10th ed.). Lippincott Williams & Wilkins.

⁹ Strandell, A., Lindhard, A., & Waldenström, U. (1999). Hydrosalpinx reduces implantation rates in IVF treatment. *Human Reproduction*, 14(3), 577–581.

- Leads to partial blockage and increases the risk of ectopic pregnancy¹⁰.

5. Peritubal Adhesions

- Adhesions form after surgery, infections, or endometriosis, tethering or distorting the tubes.
- These adhesions impair the fimbrial function and ovum capture¹¹.

6. Endometriosis-Related Dysfunction

- Endometrial implants on or near the tubes induce inflammation, alter motility, and disrupt the peritoneal environment.
- Even with patent tubes, these changes impair fertility¹²

7. Intraluminal Debris or Mucus Plugs

- Debris, inflammatory exudate, or thick mucus can obstruct the lumen temporarily.
- This functional blockage may be reversible and is sometimes misinterpreted on imaging¹³

8. Tubal Spasm (Functional Blockage)

- Smooth muscle contraction within the tube (especially proximally) can cause transient blockage.
- This can mimic true occlusion on imaging such as HSG¹⁴

9. Congenital Malformations

- Rare developmental defects such as tubal agenesis or hypoplasia result in non-functional or absent fallopian tubes.

¹⁰ Vlahos, N. F., Kalampokas, T., & Kalampokas, E. (2017). Salpingitis isthmica nodosa and infertility: A systematic review. *Archives of Gynecology and Obstetrics*, 295(3), 599–607.

¹¹ Hurst, B. S., et al. (1999). The impact of pelvic adhesions on the success of assisted reproduction technologies. *Fertility and Sterility*, 71(5), 810–814.

¹² Giudice, L. C., & Kao, L. C. (2004). Endometriosis. *The Lancet*, 364(9447), 1789–1799.

¹³ Vaid, N. B., et al. (2010). Fallopian tube blockage: Diagnosis and management. *Journal of Human Reproductive Sciences*, 3(2), 93–97.

¹⁴ . Rehman, K., et al. (2014). Tubal spasm as a cause of false-positive diagnosis in HSG. *Pakistan Journal of Medical Sciences*, 30(5), 1201–1204.

- Often associated with Müllerian duct anomalies¹⁵

10. Tuberculous Salpingitis

- Genital tuberculosis leads to granulomatous inflammation, caseation, and extensive fibrosis.
- Causes complete structural tubal obliteration and infertility¹⁶

3. Ayurvedic Interpretation of Tubal Blockage (Vandhyatva)

3.1 Artavavaha Srotas and Reproductive Channels

As per Sushruta, **Artavavaha Srotas** originate from the **Garbhashaya** (uterus) and **Artavavahi Dhamani** (arterial structures), responsible for the movement and excretion of **Artava** (menstrual and ovulatory material)¹⁷. Fallopian tubes can be understood as parts of these pathways, crucial for transporting Shukra (sperm) and Andaja (ovum).

3.2 Srotodushti: Channel Pathology

Charaka classifies **Srotodushti** into four types:

- **Sanga (Obstruction)** – most relevant to tubal blockage
- **Atipravritti (Excessive flow)**
- **Siragranthi (Tumorous growth)**
- **Vimargagamana (Misdirected flow)**¹⁸

Tubal blockage, in Ayurvedic terms, is **Sanga** in **Artavavaha Srotas**, with Dosha involvement:

- **Vata** – Functional or spasmodic blockage
- **Pitta** – Inflammatory changes
- **Kapha** – Adhesions, mucus plugs, fibrotic obstruction

¹⁵ Grimbizis, G. F., & Campo, R. (2010). Congenital malformations of the female genital tract: The need for a new classification system. *Fertility and Sterility*, 94(2), 401–407.

¹⁶ Sharma, J. B. (2008). Current diagnosis and management of female genital tuberculosis. *The Journal of Obstetrics and Gynecology of India*, 58(5), 389–392.

¹⁷ Sushruta. *Sushruta Samhita*, with English translation by Kaviraj Kunjalal Bhishagratna, Volume 1, Sharira Sthana, Chapter 9, Verse 12. Reprint edition. Varanasi: Chaukhamba Sanskrit Series Office.

¹⁸ Charaka. *Charaka Samhita*, with English translation by P.V. Sharma, **Vimana Sthana, Chapter 5, Verse 25**. Reprint Edition. Varanasi: Chaukhambha Orientalia.

3.3 Samprapti (Pathogenesis)

- **Nidana (Causes):** Infection, trauma, systemic dosha aggravation
- **Dosha:** Primarily **Vata-Kapha**, with Pitta in inflammation
- **Dushya:** **Artava, Rakta, Rasa**
- **Adhithana:** **Pakvashaya** and **Artavavaha Srotas**
- **Roga Marga:** Abhyantara (internal)
- **Vyadhi Swabhava:** Krichhrasadhya (difficult to cure)

3.4 Agantuja Roga, Which May cause Tubal Blockage -

Artava-Vaha-srotas Vedha Janya Vyadhi: This condition denotes *Agantuja Nimitta Vyadhi*, which is generated by salpingo- oophoritis after trauma to the fallopian tube and ovary.

Sapraja- This condition seems to be *Agantuja Nimittaja Vyadhi*, as secondary infertility is generally the consequence of trauma or post-partum infection. That may be the reason why *Doshas* and *Nidanas* are not described for this condition.

Kakabandhya- The same explanation can be given for the secondary infertility, as described by Harita.

Balakshaya- This condition seems to be genital tuberculosis caused by bacteria. It can also be understood as *Agantuja Nimittaja Vyadhi*, led by a tubal blockage.

Garbhasankocha- This is infertility caused by coitus in an immature girl caused by tubal and cervical stenosis, thus, an *Agantuja Nimittaja Vyadhi*.

Upadamsha- It denotes venereal diseases caused by improper coitus. It is *Agantuja Vyadhi*, which may definitely lead to tubal infertility.

Parisruta- Factors mentioned for all the Jataharinis mainly denote contagious and infectious etiological factors. Thus, *Parisruta* described by *Kashyapa* is definitely an *Agantuja Vyadhi*, which is generated by the influence of *Daiva Karanani* (idiopathic factors).

Tubal blockage in *Vandhyatva* (infertility) is often attributed to *Agantuja Hetu* (external factors), such as infections or injuries. However, when tubal blockage arises as a complication of *Shopha* or *Paka* (inflammatory or suppurative gynecological disorders), it is regarded as *Nija Hetu* (internal or endogenous cause).

4. Ayurvedic Management

4.1 Shodhana Chikitsa (Purificatory Therapy)

Uttar Basti

A key treatment in gynecological disorders affecting the uterus and fallopian tubes. It is administered intrauterine after proper Snehana and Swedana.

Common medicated oils include:

- **Apamarga Kshar Tiala**
- **Yava Kshara Taila**
- **Kumari Taila**
- **Tila Taila with Dashamoola, Guduchi, Ksheera**

Studies show that *Uttar Basti* significantly improves tubal patency and fertility outcomes¹⁹

4.2 Shamana Chikitsa (Palliative Therapy)

Herbs with the following properties are selected:

- **Srotoshodhaka (channel-cleansing)**
- **Lekhana (scraping)**
- **Tridoshaghna (balances all Doshas)**
- **Ushna, Katu, Sara, Tikshna properties**

Examples:

- *Guggulu* (Commiphora mukul)
- *Punarnava* (Boerhavia diffusa)
- *Shunthi* (Zingiber officinale)
- *Haridra* (Curcuma longa)
- *Ashwagandha* (Withania somnifera)

¹⁹ Shukla K. *A Comparative Study of Uttarabasti of Yava Kshara Taila and Kumari Taila in Tubal Blockage*. Jamnagar: Gujarat Ayurved University; 2010.

4.3 Rasayana Chikitsa (Rejuvenation Therapy)

To improve tissue quality, immunity, and reproductive strength:

- *Shatavari* (*Asparagus racemosus*)
- *Amalaki* (*Emblica officinalis*)
- *Guduchi* (*Tinospora cordifolia*)

5. Integration of Ayurvedic and Modern Approaches

An integrative approach combining Ayurvedic detoxification (Shodhana), herbal therapy, Rasayana, and modern diagnostics (HSG, SHG, laparoscopy) offers a holistic and effective strategy for managing tubal factor infertility. This aligns with **Ayurveda's personalized treatment approach** based on **Dosha, Dhātu, and Bala** assessment.

6. Conclusion

Tubal blockage is a significant but potentially reversible cause of female infertility. While modern medicine focuses on surgical and diagnostic precision, Ayurveda provides a functional and systemic understanding of the condition through **Artavavaha Srotas** and **Srotodushti**. This Vata-Kapha predominant disorder is categorized as **Krichhrasadhya Vyadhi** in Ayurveda. The use of therapies like **Uttar Basti**, **Tridoshaghna herbs**, and **Rasayana** offers promising, non-invasive, and fertility-enhancing outcomes. A collaborative approach combining ancient wisdom and modern science can provide effective solutions for infertile women with tubal factor complications.