



REVIEW ARTICLE

INFERTILITY IN THE PERSPECTIVE OF AGADATANTRA- A CRITICAL REVIEW

SELEENA V.¹ SURESH Y.² SUMANTH SHENOY³

ABSTRACT

Infertility is defined as the failure to conceive after a year of regular intercourse without contraception. Nowadays, the problem of infertility is becoming a great threat to human society. Globally, infertility incidence rate is about 15% which varies in different population. Infertility affects about 10% of Indian population. Causes of infertility lies on both male and female factors (40%-30%). In Ayurveda infertility refers to biological inability of couple in reproductive age to contribute to conception and also a state of women who is unable to carry pregnancy to fullterm. Infertility arises when shukradhatu does not get the proper nutrition which can happen due to unhealthy food habits and modern life style. Intake of junk foods, artificial colouring and flavouring agents, alcohol and other addictions etc. which may alter the digestion and metabolism and can lead to accumulation of toxins in the body. In Agada Tantra, sukrasankshaya, shanda, santhanadosha are considered as the main complications in the various concepts like dooshivisha, virudhaahara, garavisha, kritrimavisha, madatyaya etc. It is the need of the hour to interpret the relation between these concepts and infertility, hence an attempt has been made through this paper and also to think on the same lines when it comes to treating a case of infertility.

KEYWORDS: Infertility, AgadaTantra, Viruddhahara, Dooshivisha, Madatyaya.

¹PG Scholar, ^{2,3}Associate Professor, Dept. of PG studies in Agada tantra, Alva's Ayurveda Medical College, Moodbidri (DK), INDIA

Corresponding Email id: seelenav14@gmail.com Access this article online: www.jahm.in

Published by Atreya Ayurveda Publications under the license CC-by-NC-SA.

INTRODUCTION

Infertility has been an imprecation to the mankind and it has been expanding with development. *Aputrasya gruham shoonyam* is a well-known Sanskrit verse which tells about the house without a child is worthless [1]. Male without offspring is faulted as likeness to tree without fruits as mentioned in Ayurvedic literature [2].

The term *klaibya*, *napumsaka*, *shanda*, *vandhyatva* are utilized synonymously to indicate impotence and infertility in majority of the references in the classics [3]. Yet, for the most part *shukra dosha and shukradoshaja klaibya* means male infertility and *vandhyatva* as female infertility [4].

In Ayurveda, infertility arises when *shukradhatu* does not get the proper nutrition. This can happen due to poor digestion, unhealthy food habits and the presence of a certain toxins in the body.

In Agada Tantra these can be correlated with the *dooshi visha* (Cumulative toxicity), *viruddhahara* (Incompatible diet), *garavisha* (Artificial Poisoning), *madatyaya* (Alcoholism) etc. Acharyas have been mentioned *shukrasankshaya* (Oligospermia), *shanda* (Infertility) and *santhana dosha* (Genetic

disturbances) are the chief complaints of *dooshi visha and virudhahara* respectively [5].

AIMS

- To interpret the infertility in the perspective of Agada Tantra.

OBJECTIVES

- To collect and analyse the literature review of infertility in Modern and Ayurvedic concepts
- To collect and analyse the concepts of *virudhaahara*, *dooshi visha*, *garavisha and Madatyaya* in Agada Tantra and compare the relationship between these and Infertility.

METHODOLOGY

All the Ayurvedic, modern and contemporary literatures and internet sources about the infertility has been reviewed, critically analysed and documented for the study.

Concepts of Infertility

Infertility is a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse (there is no reason, such as breast feeding or post-partum amenorrhoea).

Causes of male and female infertility [6]

Male	Female
Varicocele	Ovarian
Infection	Tubal

Age-related factors	Age-related factors
Ejaculation problems	Uterine problems
Tumours	PCOD
Hormone imbalances	Endometriosis
Defects of tubules	Menstrual irregularities
Environmental factors	Stress

Infertility in Ayurveda

Reproductive health depends upon the health of *shukra dhatu* in both men and women [7]. *Shukra dhatu* is the 7th *dhatu* of our body and the other 6 *dhatu* s are responsible for creating raw material for *shukra dhatu* by the chain of metabolic transformations [8].

Shanda/Shandatwa/Klaibya

Shandatwa and *santhana dosha* are caused by *virudhahara sevana* (over usage of incompatible foods) as opined by *Acharya Charaka* [9]. In *Yonivyapath chikitsita adhyaya*, *Charaka* also mentioned that *virudhahara sevana* leads to *Klaibya*.

Etiology of Shandatwa

1. *Ahara* (dietary factors) & *Oushadha* (drug induced)
 - *Kshara* (corrosives) is described as *sukraghna* and *avrishya* (Anaphrodisiac) and its long term usage may lead to infertility.
 - Different *rasa*(tastes) will have different effects on spermatogenesis
 - *Madya* (alcohol) can lead to *sukranaasana*.

2. Vihara (activities)

- *Ativyavaya* (excessive indulgence in sex) and *Avyvaya*(Not at all indulges in sex).
- The diseases related to *medhra* (penis) [10].

Types of Shanda

There are different types of *shanda* explained in Ayurveda.

- *Bijopaghaataja shandatwa* - (infertility due to defects in genes).
- *Doshaja shandatwa* - Excessive intake of *katu-amlavavana rasa* is responsible for *dhatu kshaya* and may lead to infertility.
- *Vyadhijanita shandatwa*- Due to some diseases
- *Jarasambhava shandatwa* – Senile factors [11].

Vandhyatva

As per *Sushruta*, *Vandhya* is a woman who has lost her *Artava* i.e. Menstruation cycle [12]. *Vagbhata* clarifies that the congenital deformities of a female genital tract are the reason for *Vandhya* [13]. *Bhela* expressed that *vata* is the reason for *Vandhya* [14]

Aetiology

1. Disorders of conception-related to

- *Rutukala* (Ovulation period) –
eg: kaphapradhanya
- *Kshetra* (Uterus) – *eg:vyapanna yoni garbhashaya*
- *Ambu* - *eg: garbhsravi*
- *Beeja*- *eg:artava dushti*^[15]

2. Disorders of physiology of conception-

Eg. *Asamyak maithuna*

3. Other- *rajodushti, yonivyapad, yoniarsha* etc^[16]

In Sushruta Samhita, *Vandhyatva* has been included in twenty *Yonivyapad*. Charaka and Vagbhata have referred *Vandhyatva* due to the abnormality of *Beeja* ^[17].

Types of *Vandhya*

Harita has explained six types of *Vandhya*.^[18]

1. *Balya*- Delayed puberty
2. *Kakavandhya*- One child sterility
3. *Anaptya*- Primary sterility
4. *Garbhasravi*- Repeated abortion
5. *Mrutavatsa*- Still births
6. *Balakshaya*- Infertility due to *Dhatukshaya*.

Infertility in perspective of Agada tantra

a) Infertility and *Virudhahara*

The substances which, when consumed cause aggravations of *doshas* but do not expel them out of the body and brings about abnormality in *dhatu*s are called as *virudhahara*^[19]. There are 18 types of *virudhahara* are explained by

Acharya Charaka^[20] and 4 types are mentioned by Sushruta^[21] and Vagbhata.

The incompatible diet could be considered homogeneous to poison and artificial poison, if taken simultaneously and perpetually. Consuming 2 incompatible food items together or a particular type of diet may incline to toxicity. Due to the metamorphic lifestyle, there is extensive exposure to toxins.

Virudhahara can lead to inflammation at a cellular level. This inflammation alters the normal physiology that creates *agnimandya*(Reduced appetite), *ama* and responsible for causation of many diseases. According to Acharya Charaka *vandhyatva* and *santana dosha* comes under this^[22].

The *shukra dhatu* requires a cold environment in order to fortify fertility^[23]. So excessive use of hot and spicy food may leads to less motility of sperm in men and also lowers the quality of the ovum in women. Therefore, avoid excessive intake of foods like hot chili spices, onion garlic, coffee, carbonated drinks, fast foods, refined sugar and processed foods.

b) Infertility and *Dooshivisha*

Dooshivisha is a low potency poison. It remains in the body for longer duration and causes various diseases when comes in contact with triggering factors like place, time, food, day sleep etc^[24]. *Shukra sanshaya* mentioned as a complication of *dooshivisha* by Acharyas^[25].

Dooshivisha can be correlated with cumulative toxicity. Cumulative toxicity is due to food preservatives, artificial sweeteners, emulsifiers, flavours and artificial fruit ripening chemicals adulterants etc^[26]. Artificial colours in the sweets, sweet drinks, curry powder, cake decorating gels, etc. are adversely effects on the ovaries and testes^[27]. Also cause DNA damage, growth retardation and interferes on the spermatogenesis. Artificial flavours like monosodium glutamate (AJINOMOTO) has the affinity to affect the reproductive system and it has a reduced potency, so it comes under the category of *dooshivisha*^[28].

c) Infertility and Garavisha

Garavisha is a tremendous viewpoint mentioned in the Ayurvedic classics which can be compared with various sources of exposure of toxins through our daily life activities. People are least cognizant of the toxins they are exposing in the day to day life.

Garavisha can be classified under *kritrima* (Artificial poison) or *samyogaja visha* (Combination of poisons) by Acharyas. Two types of *garavisha* are explained in our classics as - *savisha dravya samyoga* (combination of two poisonous substances) and *nirvisha dravya samyoga* (combination of two non-poisonous substances)^[29].

Some of the examples of *garavisha* like amenorrhea and sterility in chronic lead poisoning, impotency in chronic arsenic

poisoning and oligospermia in chronic agrochemical poisoning. Fertility and sexual problems due to chemotherapy drugs and other adverse drug reactions^[30].

d) Infertility and Madatyaya

Tobacco, alcohol and drug addictions are considered as the primary driver for infertility as well.

Alcohol consumption is often considered socially acceptable, but its effects on gonadal dysfunction have been consistently reported in the last 30 years.

Excessive intakes of *madya (alcohol)* or *madatyaya* lead to infertility are as of now said in our works of art^[31].

e) Infertility and Other Addictions

Tobacco smoking is remarkably common and prevalence rate is more than 30% in reproductive age, resulting in the bad effects on the reproductive and sexual function as well as general health.

Drug addiction at a younger age and reproductive age is a nervous phenomenon several studies have been proclaimed that drug abuse is a triggering factor for male infertility.

Drugs and alcohol use in women may alter the menstrual cycle, reproductive system and causes infertility in women. The study says that women who are heavy alcohol users and drug addicts or tobacco users are likely to experience fertility problems and delayed

conception compared to low and moderate users [32].

DISCUSSION

Various concepts in Agada tantra like *dooshivisha*, *garavisha*, *viruddhahara* are responsible for infertility. The food, drinks, medicines, cosmetics, toothpaste, etc. are now possessed with one or another form of poisons. Previous reports suggested that there are the 6 most common toxins in above said items which cause infertility are Bisphenol-A (BPA), parabens, phthalates, dioxins, organophosphates, heavy metals.

Acharyas says that certain diet and its combinations which interrupts the metabolism and formation of tissues and having opposite quality of tissues are called *Viruddhahara*. Infertility and impotency are major issues caused by *Viruddhahara*. So it is evident that *Viruddhahara* lead to the impairment of *sukradhatu*.

Dooshi visha is a poison which is not completely eliminated from the body. *Acharya Shusruta* mentioned *Kshapayeth sukram* (oligospermia) is a clinical symptoms in *Dooshivisha*. A research has been done on "Evaluate the efficacy of *dushivishari agada* in *shukra samkshaya* w.s.r. to oligoasthenospermia" by Sathisha.M.S. in 2013, this result suggests that there is a scope for *Agada* management in infertility. The cytoprotective activity of *dooshivishari agada* has been proved in the study which is

conducted in KLEU Shri BMK Mahavidyalaya by Dr Jyoti Rani and Dr Mahesh P Savalagimath on the topic "Effect of *Dooshivishari Agada* over MSG induced reproductive toxicity w.s.r. ovary and follicle count". MSG produce oxidative stress which leads to apoptosis of follicle which was proved in the present study in which MSG has produced ovarian toxicity by decreasing primordial, primary, secondary, tertiary and graffian follicle counts and corporal luteal counts. The ingredients of *Dooshivishari Agada* (DVA) like *jadamansi*, *pippali* and *tagara* have antioxidant property with which DVA counteracted the effect of MSG. Along with that the whole formulation act as *vishagna* and reversed the effect of MSG.

Garavisha is generally compared with artificial poisoning. Infertility due to heavy metal poisoning, adverse drug reactions, toxic food consumptions are renowned concepts. "Experimental study on cytoprotective activity of *Ashwagandha siddha ghruta* against cyclophosphamide induced toxicity in bone marrow and testes in wistar rats" by Goutham S.P. in his research, stated that cyclophosphamide itself is carcinogenic and it is widely used in chemotherapy. It also has side effects on bone marrow toxicity and testicular cell damage and causes infertility.

Madatyaya and other drug addictions are also a cause for male as well as female infertility.

Studies regarding infertility states that these addictions are triggering factors.

The aspect is wider when we think of possible toxins which can get into our food, drinks, cosmetics, drugs, environmental pollutions during the daily life cycle. Infertility management through Agada Tantra is a unique concept put forward by this Article. There are many natural foods and herbs that can be consumed by men and women that can help you in conceiving faster. Promote the healthy diet and habits; avoid the bad habits like smoking, alcohol and other drug addictions.

CONCLUSION

Infertility is an igneous issue enormously increasing day by day. Several types of treatments are existing in the modern medical science. But the chance of success of treatments are very difficult to estimate. Agada Tantra consider major causative factors for infertility are *virudhahara*, *dooshivisha*, *garavisha* etc. It is the need of an hour to treat this condition in the perspective of Agada Tantra by exploring the above-verbalized concepts and adopting the line of treatment which is explained under those concepts.

REFERENCES

1. Sunder Hattangadi, editor. Chanakya niti of Chanakya [Sanskrit monograph on the internet]. verse no.14, 2013 [updated 2018 September 29; cited 2019 January 15]. Available from: <https://sanskritdocuments.org>.
2. Vidyadhar Shukla, Ravi Dutt Tripathi (editors). Charaka Samhita of Charaka, Chikitsa Sthana, chapter 2, verse

- no.16-18. 2nd edition, Chaukhamba Sanskrit Pratishthan; 2013:49
3. Dinakar Govind Thatte (editor). Susruta samhita of Susruta, Shareera sthana, chapter 3, verseno.4. 2nd edition, Chaukhamba Orientalia; 2005:45
4. Nirmala G. Joshi. Ayurvedic Concepts in Gynaecology. Chapter 8, Chaukhamba Sanskrit Pratishthan; 2006:95
5. K.R. Srikantha Murthy (editor). Charaka Samhita of Charaka, Sutrasthana, chapter 26, verse no.101-104. 1st edition, Chaukhamba Orientalia; 2013:419
6. Christian Nordqvist. Infertility in men and women. Medical news today. 2018 Jan 4 [cited 2019 Jan 4]. Available from: <https://www.medicalnewstoday.com>.
7. K.R. Srikantha Murthy (editor). Ashtanga Hrudaya of Vagbhata, Vol.1, Sutrasthana, chapter 11, verse no.4. 8th edition, Chaukhamba Sanskrit Series; 2011:155
8. K.R. Srikantha Murthy (editor). Sushruta Samhita of Sushruta, Vol 1, Sutra sthana, chapter 26, verse no.10-11. 1st edition, Chaukhamba Orientalia; 2012:88-89
9. K.R. Srikantha Murthy (editor). Charaka Samhita of Charaka, Sutra sthana, 2013 reprint edition, chapter 26, verse no.102-103, 2nd edition, Chaukhamba Orientalia; 2013:419
10. Ambika Dutt Shastri (editor). Sushruta Samhita of Sushruta, Vol. 1, Chikitsa sthana, chapter 26, verse no.10-11. 2nd edition, Chaukhamba Sanskrit Sansthan; 2012:147
11. Ambika Dutt Shastri (editor). Sushruta Samhita of Sushruta, Vol. 1, Chikitsa sthana, chapter 26, verse no.10-11. 2nd edition, Chaukhamba Sanskrit Sansthan; 2012:147-148
12. Narayana Sharma (editor). Commentary: Nibandha samgraha of Dalhana on Sushruta samhita of Sushruta, Uttara tantra, chapter 38, verse no.10. 1st edition, Chaukhamba Sanskrit Series; 1939: 669
13. Jyothir mitra (editor). Commentary: Sasilekha of Indu on Ashtanga Samgraha of Vriddha Vagbhata, Sharira sthana, chapter 2, verse no.35-37. 2nd edition, Chaukhamba Sanskrit series; 2006:282
14. K.H. Krishna Murthy (editor). Bhela Samhita of Bhela, Sharira sthana, chapter 2, verse no.195-198, 2nd edition. Chaukhamba Vishwa Bharati; 2008

15. Dinakar Govind Thatte (editor). Susrutha samhita of Shusruta, Sharira Sthana, chapter 2, verse no.35. 2nd edition, Chaukhamba Orientalia;2005:32-33
16. Nirmala G. Joshi. Ayurvedic Concepts in Gynaecology, Chapter 8 Chaukhamba Sanskrit Pratishthan;2006;99
17. Nirmala G. Joshi, Ayurvedic Concepts in Gynaecology, Chapter 8, Chaukhamba Sanskrit Pratishthan;2006;96
18. Ramavalamba Shastri (editor). Haritha Samhita of Haritha, Trithiya Sthana, chapter 48, verse no.3. 1st edition,Prachya prakashana;1985:394-398
19. Atrideva Gupta, Yadunandana Upadhyaya (editors). Ashtanga Hridaya of Vagbhata, Sutra Sthana, chapter 7, verse no.29, 12th Edition, Varanasi: Chaukhambha Sanskrit Bhawan;1997:69
20. Vidyadhar Shukla, Ravi Dutt Tripathi (editors). Charaka Samhita of Charaka Vol. 1, Sutra Sthana, chapter 26, verse no.102-103. 1st edition, Delhi: Chaukhamba Sanskrit Pratishthan;2015 :385
21. Ambika Dutt Shastri (editor). Sushruta Samhita of Sushruta, Vol. 1, Sutra sthana, chapter 20, verse no.8, 1st edition. Varanasi: Chaukhamba Sanskrit Sansthan; 2010:108-109
22. Munish kumar, Parvesh Kumar,Umesh shukla.Review article on viruddhahara with special reference to Garavisha, Ayurpharm Int J Ayur Alli Sci. 2016;5(8):109-113
23. California college of Ayurveda [homepage on internet].The Seven dhatus (tissues) in Ayurvedic Medicine, Nevada city;c 1995-2019 [upadated 2016 Nov 30; cited 2019 Jan 6] Available from: <https://www.ayurvedacollege.com> .
24. Ambika Dutt Shastri (editor). Sushruta Samhita of Sushruta, Vol. 1, Kalpa sthana, chapter 2, verse no.31, 1st edition. Varanasi: Chaukhamba Sanskrit Sansthan; 2010:33-34
25. Ambika Dutt Shastri (editor). Sushruta Samhita of sushruta, Vol. 1, Kalpa sthana, chapter 2, 1st edition, Varanasi: Chaukhamba Sanskrit Sansthan;2010:53-54
26. Kundan Rameshwar Meshram, Aravind Charandas Tumram, Waquar Ahamad Khan, Shama S Suryawanshi.Cumulative food toxicities in India and their management in perspective of Ayurveda: A critical review, European J of pharmaceutical and medical research (ejpmr). 2017;4(8):247-254
27. Poorva chavan.Why artificial food colours are bad for your health, [updated 2015 April 3, cited jan 4 2019].Available from: <https://www.thehealthsite.com> .
28. Jyoti Rani,Mahesh P Savalagimath. Effect of Dooshivishari Agada over Msg-Induced Reproductive Toxicity W.S.R. Ovary and Follicle Count, Ayu. 2017 Jan-Jun; 38(1-2): 88-92
29. Sekhar Nambutiri U R. Text Book of Agadatantra;1st edition, Varanasi: Chaukhambha Sanskrit Sansthan;2006 :178-181
30. Fouad M Badr,Ola El- Habit. Heavy metal toxicity affecting fertility and reproduction of males, science direct. 2018;293-304. Available from;<http://www.sciencedirect.com>.
31. Sekhar Nambutiri U R. Text Book of Agadatantra; 1st edition, Varanasi: Chaukhambha Sanskrit Sansthan;2006:182-192
32. Sansone A, Di Dato C, De Angelis C, Menafra D, Pozza C, Pivonello R, Isidori A, Gianfrilli D. Reprod Biol Endocrinol et al, Smoke, Alcohol And Drug Addiction And Male Fertility,Reprod Biol Endocrinol,ncbi.2018 Jan 15; 16(1):3

Cite this article as: Seleena V., Suresh Y., Sumanth Shenoy. Infertility in the perspective of Agadatantra- a critical review. *J of Ayurveda and Hol Med (JAHM)*.2019; 7(2):42-49

Source of support: Nil

Conflict of interest: None Declared