

ROLE OF AYURVEDA NEUTRACEUTICALS IN INFERTILITY

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Abstract

Inability of a male to cause pregnancy in a fertile female is called male infertility and is commonly due to problems in Semen quality and Semen quantity. Vajeekarana/Vrsha chikitsa is one of Ashtangas of Ayurveda which is not explored widely. Among them 'Pathya Kalpana' yogas which are Vrishya are not common in practice. Pathya kalpana is a branch of Bhaishajya Kalpana mainly deals with food preparations having medicinal value. This work aims to review food preparations having impact on Sukradathu from Bhavaprakasha and Yogaratnakara and preparation of some selected yogas among the same. Neutraceutical and food compliments are the emerging fastest growing industries today which can be included under the broad spectrum of Pathyakalpana. Identifying neutraceuticals which are vrishya, sukrala and adopting it in current clinical practice may pave a new way in augmenting the treatment of infertility. It is a supportive treatment and may increase the quality and count of sperm. As 'Aaharam Mahabhaishajyam-Identifying simple and delicious food items which become more acceptable to Public.

Keywords-Neutraceutical, Infertility, Pathyakalpana.

Introduction

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. Infertility is the inability of a sexually active, non contracepting couple to achieve pregnancy in one year.¹ (WHO - ICMART Glossary)

Infertility affects on estimated 15% of couples globally, amounting to 48.5 million couples. Males are found to be solely responsible for 20-30% of infertility cases and contribute to 50% of cases overall.²

It may be one or a combination of low sperm concentration, poor sperm motility, or abnormal morphology³. Male infertility is commonly due to deficiencies in semen and semen quality and is used as a surrogate measure of male fertility.

Many treatment options are available for male infertility in modern medicine as well as in Ayurveda. In Ayurveda, male factors responsible for fertility can be included under the broad name of 'sukra dathu'. Sukradathu is the final of all dathu, it is the essence of all dathus. As 'Rasadathu' finally got transformed to Sukra dathu, Ahara rasa got prime importance in formation of Sukradathu. 'Ahara' which is known as Mahabhaishajya according to Kasyapa, have a very good role in Sukradathu.

A good and proper diet in disease is worth a hundred medicines and no amount of medication can do good to a patient who does not observe a strict regimen of diet, also Ayurveda very well details about Aharavarga. It is divided into twelve such as Sukadhanya, Samidhanya, Mamsa, Saka, Phala, Harita, Madya, Ambu, Gorasa, Ikshuvikara, Kritanna, Aharayogivarga. No other medicine is there which is Aahasama'.

Pathyakalpana which is a branch of Bhaishajya Kalpana which is very unique to Ayurveda only. It includes Annakalpanas, Yushadi Kalpanas, Takra Kalpanas, Dadhi Kalpanas, Mamsa Kalpana etc.

Neutraceuticals is an emerging branch which refers to foods having medicinal effect on health of human beings, which can be considered under the broad concept of Pathya kalpana.

Bhavaprakasha, Yogaratnakara which are famous Ayurveda classics, which Bhavaprakasha explains many vargas among them kritanna varga is also included. Kritanna varga contain many food preparations which are having medicinal value. Yogaratnakara also explains some of food preparation. Food preparations which augment the quality / quantity of spum is selected for study in this work.

Aims and Objectives

This study aims to analyse the role of Ayurveda Neutraceuticals in infertility.

Materials and Methods

- 1) Review of food preparations having impact on Sukradathu from Bhavaprakasha, Yogaratnakara.
- 2) Few formulations were selected and prepared in R & B department laboratory, Govt. Ayurveda College Trivandrum

Table No.1 Showing Ingredients, Mode of Preparation and use of few Pathyakalpna yogas with special reference to Male Infertility described in Yogaratnakara⁴ and Bhavaprakasha⁵.

Sl. No.	Name	Ingredients	Mode of preparation	Use
1.	Payasa (Y.R.)	Dugdha, Godhuma	Milk should be boiled and reduced to half. Add 1/8 th godhuma and cooked again to make it neither liquid nor very thick.	Sukravardhana
2.	Angara Karkati (Y.R.)	Godhuma churna, Chanaka (1/8 th powder), Yavani, Hingu, Lavana, Ajya	All Ingredients should be kneaded together, made into small circular pieces, should be depressed in centre and cooked in smoke less fire to turn red hot.	Sukrala
3.	Angarika (Y.R.)	Godhuma churna, Sarkara, Ghrita	Godhuma churna added with sugar, ghritha, kneaded hard with hand	Mahavrshya
4.	Vaidala Poorika (Y.R.)	Chanaka, Jaggery, Lavana, Ajaji, Hingu	Pulse of Chanaka is steamed, then finely ground with jaggery, salt, ajaji, hingu and filled into dough of wheat flour and then fried.	Sukrala
5.	Rasala (Y.R.)	Dadhi, Maricha, Ela, Sitha	Curd is churned with sugar, honey, ghritha, maricha, ela.	Sukrala
6.	Prthuka (Y.R.)	Paddy	Boiled paddy is pounded to flatten and then parched	Sukrala
7.	Tapahari (B.P)	Masha churna, Tandulachurna, Ghrita, Haridra, Water, Lavana, Ardraka, Hingu	Flour of masha and tandula churna is made into vati, both mixed and then fried in ghee with little of haridra for some time. Then water, salt, ardraka, hingu are also added and cooked.	Vrshya
8.	Narikela Ksheerika (B.P.)	Narikela, Payas, Sitha, Ghrita	Coconut pulp is converted into small shreds, boiled in cows' milk over mild fire adding sugar and cow's ghee during boiling	Vrshya
9.	Mandaka (B.P)	Samita (Wheat washed, dried well, Powdered)	Samita is added with water and made into soft paste by kneading by hands, then spread as thin cake on a pot kept upside. It is cooked with mild fire. It is consumed with dugdha, ghee, sugar candy or with cooked meat / vataka.	Vrshya
10.	Polika (B.P.)	Samita	Samita is made into very thin, round flakes and then cooked on a pan consumed along with Lapsika.	Same as Mandaka
11.	Lapsika (B.P.)	Samita, Ghrita, Milk, Sita, Lavanga, Maricha	Samita fried in ghee is put into milk added with sugar. When it becomes solid, Lavanga, Maricha etc. should be added and then consumed.	Vrshya
12.	Angarakaraki (B.P.)	Godhuma Churna, Water	Wheat flour is mixed with water, kneaded well is made into vataka and cooked directly on a burning coal.	Sukrala
13.	Bedhamika (B.P.)	Masha, Godhuma Churna	Rotika prepared with wheat flour in the interior of which there is paste of maricha and cooked	Vrshya.
14.	Vataka (B.P.)	Masha, Lavana, Ardraka, Hingu	Pishtika of masha is added with salt, ardraka, hingu etc. is made into round vataka and cooked in	Veerya vardhana

			oil over mild fire.	
15.	Sarasa Vataka (B.P.)	Vataka, Takra (Added with Jeeraka, Hingu, Lavana)	Dry vataka are made into small pieces, soaked in Takra added with fried Jeeraka, Hingu and Lavana.	Suklakara
16.	Allikamatsya (B.P.)	Masha Pishti, Nagavalli	A big leaf of Nagavalli is given a coating of masha, placed over a thick cloth tied to the mouth of a vessel containing water and covered with a lid Water is then boiled and the leaf is cooked by steam. Then it is taken out and fried in oil and consumed.	Vrshya
17.	Mamsa Sringataka (B.P.)	Suddha Mamsa, Jala, Lavanga, Hingu, Lavana, Maricha, Ardraka, Ela, Jeeraka, Dhanyaka Nimbu juice, Ghrita, Wheat flour	Suddha mamsa is cut into small thin pieces, cooked in steam of water. Lavanga, Hingu, Lavana, Maricha, Ardraka, Ela, Jeeraka, Dhanyaka, Nimbu Juice are added to meat and rubbed with a little ghee and rolled into balls. It is covered with Samitha and deep fried in ghee.	Vrshya
18.	Mantaka (B.P.)	Samita, Ghrita, Sitapaka, Ela, Lavanga, Karpura, Maricha	Samita is kneaded well with a little of ghee, made a cake and cooked in ghee. Sugar water boiled to a gummy fluid consistency is prepared to which powder of Ela, Lavanga, Karpura, Maricha cakes are immersed in it and taken out.	Vrshya
19.	Karpura Nalika (B.P.)	Samita, Ghee, Lavanga, Ushana, Karpura, Sita	Samita added with more of ghee and little of power of Lavanga, Ushana, Karpura, Sita and made into small long pieces and then deep fried in ghee.	Similar to Sampava
20.	Sarkarodaka (B.P.)	Sarkara, Ela, Lavanga, Karpura, Maricha	Pure Sugar is dissolved in clean water and powder of Ela, Lavanga, Karpura and Maricha	Sukrala
21.	Palala (B.P.)	Tila	Paste of Tila	Vrshya
22.	Dugdha kupika (B.P.)	Dugda, Rice flour, Ghee, Khandapaka, Karpura	Solid portion of milk is added with rice flour to make it thick, rolled into balls of moderate size and fried in ghee. After cooling, a hollow is made, its mouth closed tight and again fried in ghee and / immersed on khandapaka which is scented with karpura.	Vrshya

Preparation of Vaidala Poorika

Study Setting

Rasasastra and Bhaishajya Kalpana department laboratory, Government. Ayurveda College, Trivandrum.

Ingredients

1.	Chanaka	-	Cicer arietinum	-	20gm
2.	Guda	-	Jaggery	-	30 gm
3.	Lavana	-	Saindhava Lavana	-	3 gm
4.	Ajaji	-	Cuminum cyminum	-	150 mg
5.	Hingu	-	Ferula northax	-	100 mg
6.	Wheat flour	-		-	25 gm
7.	Ghee	-	Cow's ghee	-	QS

Mode of Preparation

20gm of Chanaka is taken and put into water a day before preparation. Next day, when chanaka became swollen, it was taken and steamed. 30 gm of jaggery was taken and scraped. Required quantity of ajaji, hingu, lavana were taken fried and powdered separately. Steamed chanaka was ground along with jaggery, ajaji choorna, hingu choorna and salt. Then it was rolled into balls of lemon size. Wheat flour was made into dough using water. Rolled chanaka balls were filled into dough of wheat flour and fried in ghee until a golden brown colour was attained.

Use

Sukrala

Discussion

For a healthy conception, semen should be of good quality which means sufficient number of spermatazoa, good motility and normal morphology. In Ayurveda terms like Vrshya, Sukrala Sukrada, Mahavrshya, Sukravardhana, Retapsuhti, Sukrakara, Param Vrshyam Indicate the factors which improve the quality of sperm or increase the number of sperm. The terms Sukrala, Sukrada, Sukravardhana, may indicated in Oligo spermia, Azoospermia, Necrospermia. The food preparations having similar gunas may increase the sperm count.

The food preparation having 'Retapsuhti' guna may increase the volume of semen. Preparations having Vrshya, Mahavrshya guna may act as a total tonic to male genital system. As the qualities of vrshya drugs are similar to that of sukra dathu, due to samanya bhava, sukradathu will increases and good quality spermatozoa can be produced. By analysing, fourteen food preparations are found in Yogaratnakara, twenty seven preparations are found in Bhavaprakasha.

In Yogaratnakara, two preparations are Sukravardhana, three are Vrshya, seven are Sukrala. One is explained as Mahavrshya and one as Retapsuhtika. In Bhavaprakasha, fifteen preparations are Vrshya, three preparations are Sukrala, two preparations are Suklakara, one is Veeryavardhana, one is Param vrshyam, one is Sukravarddhikara and one is indicated in Alparetas.

From this work, it can be understood that, by using simple food ingredients, medicinal valued preparation can be prepared. As they are very delicious, these are very acceptable to public. These type of food preparation can augment the treatment of male infertility.



Fig No.1-Payasa



Fig No.2-Vaidala Poorika



Fig No.3-Rasala



Fig No.4-Vataka



Fig No.5-Karpoora nalika

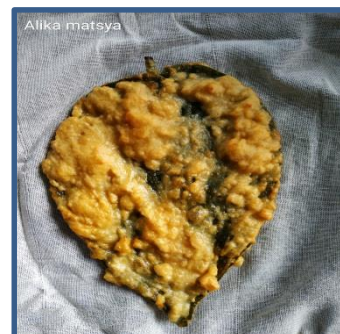


Fig No.6-Alika matsya

Conclusion

It can be concluded that there are numerous food based products available in Ayurveda for the treatment of Male Infertility. These formulations are very effective as well as feasible remedy to solve the problem related to infertility prevailing in

the modern society. If these are introduced into the public they can serve them in a healthy way. These ancient nutraceuticals can be modified into value added forms and can be according to present day needs.

List of Abbreviations:

- 1.Y.R-Yogaratnakara
- 2.B.P-Bhavaprakasha

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