ROLE OF GARLIC AS A FERTILITY ENHANCER – A REVIEW.

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ABSTRACT

Fertility is the power awarded by God to every species. So that every species will always exists on this earth. Infertility is the absolute state of inability to conceive. The rate of infertility is steadily increasing due to change in life style, pollution, socioeconomic causes, stress, etc. According to Acharya Susruta four essential factors for fertility are - Ritu (proper fertility period), Ambu (proper nourishment of developing zygote), Beeja (the activated ovum & sperm) & Kshetra (physiological maturity & healthy organ of reproductive system). Any short come of above factors causes infertility. Since thousands of years, Garlic (Allium sativum-Linn.) has been widely used as one of the natural fertility enhancer & dietary factor. According to Ayurveda, it treats number of diseases along with an aphrodisiac & rejuvenator property. As per Kashyapa Samhita, it produces Shukra, Shonit & Garbha & is best for stability of life; but now a days it is often neglected. Considering the increased demand of anti- infertility drugs, Garlic being cheap & easily available, chosen for a literary review. Garlic contains more than hundred biologically useful secondary metabolites & Sulphur containing compounds, which are responsible for its odor & numerous healing properties. Garlic has anti-oxidant property, which improve general health & inhibits premature aging. Studies have shown that in proper doses intake of garlic improve seminal fluid, sperm count & balance hormonal level as well. In addition, it has anti-bacterial, antifungal, anti-inflammatory & stimulating properties & used in uterine & menstrual problems in women. Garlic detoxifies organ system, induces relaxation & promotes longevity. Thus, it helps to cure etiological factors of infertility.

Keywords – Garlic, Aphrodisiac, Infertility, Anti-oxidant, Fertility enhancer.

1. INTRODUCTION

Fertility is the power awarded by God to every species. So that every species will always exists on this earth. Ability to reproduce & perpetuate the species is one of the most remarkable features of living system. Infertility is the absolute state of inability to conceive. The fertility of marriage is a sum of fertilities of the two partners. Human infertility is regarded as disgrace, as a mark of Divine displeasure, as a ground for divorce & even for compulsory suicide. In addition, it is a major health problem. The rate of infertility is steadily increasing due to change in life style, pollution, socioeconomic causes, stress, etc1. According to Acharya Susruta four essential factors for fertility are - Ritu (proper fertility period), Ambu (proper nourishment of developing zygote), Beeja (the activated ovum & sperm) & Kshetra (physiological maturity & healthy organ of reproductive system)2. Any short come of above factors causes infertility.

Failure to achieve conception by a couple of mature age, having normal coitus, during appropriate period of menstrual cycle, regularly at least for one year is termed as infertility3,4. It develops due to fault in either of the partner or both of them. Being infertile is a psychological trauma for men & women. Now a day’s percentage of infertile couple increasing due to late marriage, marital disharmony & psychological factors etc. Infertility (Vandhytva) is also an independent disease rather a cardinal feature of so many diseases. In Charaka samhita Vandhytva has been included in twenty-yonivyapada5. Drugs which helps in
Garlic is nature’s gift to human beings. Since thousands of years, Garlic has been widely used as one of the natural fertility enhancer & dietary factor. It has long history & supposed that it originates from Amrata. Renowned Greek philosopher Aristotle (384-322B.C.E.) included Garlic as aphrodisiac. Although highly regarded as medicine, Garlic was avoided in cookery because of its Tamsik & stimulant quality by upper class Hindus, Buddhist Jaina’s, widows, & those who had taken a vow or were fasting. According to Ayurveda, Garlic treats number of diseases along with an aphrodisiac & rejuvenator properties. In Kashyapa Samhita, there is a special chapter, ‘Lasunkalpa Addhya’ on pharmaceutical preparation & uses of Garlic. In this chapter fertility action of Garlic in male & female is mentioned, but now days it is often neglected. It is cheap, easily available & easy for use. Keeping all these facts in mind & considering the increased demand of anti-fertility drugs, a literary review of Garlic is taken in this article. Garlic is strongly aromatic bulb belonging to the family Liliaceae. Scientifically it is known as Allium sativum - Linn & in Sanskrit, ‘Rason’; means lacking of one taste i.e. sour. It is perennial herb & cultivated for the past five thousand years in warm climate throughout the world.

2. REVIEW OF GARLIC

2.1. Chemical constituents

It contains water, protein, carbohydrates & other substances like calcium, phosphorous, iron & vitamin B-complex. It also contains volatile oils & compounds of sulphurs, which are responsible to its sharp odor. When crushed, garlic yields allicin, an antibiotic & antifungal compound. It also contains diallyl disulphide, diallyl trisulphide, vinylthins, ajoene, allicin, etc.

2.2. Ayurvedic properties

In Ayurveda Garlic bulbs are described as ‘Mahaushadhi’ & superior medicine for ‘Vata Dosha’. According to Ayurveda, it contains five tastes except sour. It is hot in potency & pungent in post digestive taste, unctuous, sharp & heavy; it pacifies Kapha & Vata & aggravates Pitta & Rakta. Due to its properties it cures common diseases & increase longevity. It is appetizer, aphrodisiac, rejuvenating, digestive, carminative, cardiac stimulant, expectorant, analgesic, anthelmintic, & foremost for disease free state. It is clarifier of memory, intellect, strength, age, complexion & eyes (sight) & cleaner of channels. It is producer of Shukra (sperm & seminal fluid), & Shonita (ovum & ovarian hormones.), Garbha (pregnancy) & is beneficial for hair. Also, it is best for stability of life.

Garlic’s aphrodisiac action is mentioned in Charka Samhita, Susruta samhita, Ashtanga sangraha, Kashyapa samhita & Bhavprakasham nighantu but Aacharya Kashyapa gives detail description of uses of garlic & its pharmaceutical preparation in ‘Lasunkalpaaddhya’ of Kalpasthan. Kashyapa mentioned that Garlic originates from Amruta. When wife of Indra’s (Indrani) did not achieve conception even for hundred years, then Indra made her to give his nectar. Due to eating nectar eruption developed & this nectar falls down spontaneously in unholy place & from this Amruta, garlic grew. Therefore, it has rejuvenating & aphrodisiac properties & it cures infertility. In addition, Kashyapa mentioned that if women eat Garlic their beauty, progeny & strength never decreases, breast neither become lax & their youth becomes stable. Garlic also cures disease of sacral region, hips & other parts of body & if women consume garlic, she neither becomes infertile nor look ugly. The man becomes stout, intelligent, with good longevity, with good progeny, does not get tired in coitus & retains shukra (seminal ejaculate).

Acharya Vagbhata described that garlic increases fire & cleans the seeds of men & women. It also cures the seminal & menstrual disorders. Basti of Lasunadi tail provides vigour/virility & progeny even to impotent, infertile & very old persons. In this way, we conclude that Garlic is one of the best fertility enhancer & it cures the problems leading to infertility. Methods, contraindication, types, preparations, doses & period of use of Garlic has been also mentioned in detail in Kashyapa Samhita.

2.3. Effect of Garlic on reproductive system according to modern science
For thousands of year Garlic has been widely regarded as one of the top natural fertility enhancers for men. It contains selenium which is an antioxidant mineral that’s necessary for properly shaped sperm & to maintain sperm count & it has vit-B6 which fortifies the immune system & is responsible for formation of male sex hormone i.e. testosterone.\(^{12,16}\) Garlic is beneficial in the treatment of erectile dysfunction & impotence. It contains hundreds of minerals & nutrients. It is very likely that no one ingredient is the active ingredient. To obtain an erection an enzyme is required called Nitric oxide synthase & compounds in garlic stimulates the production of this enzyme in people who suffer from low level of it. Garlic improves blood circulation significantly & keeps veins & arteries youthful, but that is only one way it helps with impotence. However, the impact of Garlic has not been clearly defined. Some studies have reported that Garlic improves male sexual function & has beneficial effect in the recovery of testicular function.\(^{12,13,14,15}\) However, other authors have shown that this plant impairs testicular function (such as inhibition of testosterone production.) & has spermicidal effect on spermatozoa.\(^{14,17}\) The main difference & the possibly the reason between different results could be the lack of standardization between research model & different amount of garlic gives to test subject.\(^{12}\) Therefore studies have shown that in proper doses & preparation, intake of garlic improves seminal fluid & sperm count & balance normal hormonal level as well.\(^{14}\)

The end of the fertile phase in women’s life is known as menopause & garlic is useful to delay the menopause. New research shows that taking garlic during pregnancy can cut the risk of pre-eclampsia\(^ {18}\). Studies shows that garlic may help to boost the birth weight of babies that would otherwise be too small. Garlic has antioxidant\(^ {21}\) properties, which improve general health & inhabit premature aging.\(^ {22}\) In addition, it has anti-bacterial,\(^ {11,23}\) antifungal,\(^ {11,23}\) antiviral,\(^ {10}\) anti-inflammatory & stimulating properties & used in uterine & menstrual problems in women. Garlic detoxifies organ system, induces relaxation & promotes longevity. Thus, it helps to cure etiological factors of infertility.\(^ {19}\)

2.4. Other uses

There is so much more information about this wonderful herb & lot of research still going on. Surprisingly, the way Garlic is prepared appears to affect its healing qualities. When the clove is cut or crushed, an enzyme contained within plant cells combines with an amino acid, which has been shown to kill 23 types of bacteria, including salmonella.\(^ {11}\) When Garlic is heated, a different compound is formed that is good blood thinning agent,\(^ {23}\) preventing arteries clogging,\(^ {24,25}\) avoiding blood clots that could lead to heart attack or stroke,\(^ {26,27}\) & reducing blood pressure\(^ {27}\) & bad cholesterol levels.\(^ {27}\) Garlic may even prevent cancer\(^ {24,28}\) because it contains vitamins such as C, A & B, which stimulate the immune system to eliminate toxins & combat cancer-producing substances.

2.5. Adverse effect of Garlic

As per Ayurveda Garlic should not be used in the persons having predominance of Pitta & Rakta dosha. Excessive use of Garlic produces toxic effects like burning sensation in the mouth & intestine & odor from the breath. Skin reactions have also been reported. Consumption of garlic enhance the pharmacological effects of anticoagulants (warfarin, fluindione) & reduces the efficacy of anti-AIDS drug Saquinavir.

3. DISCUSSION & CONCLUSION

Fertility enhancer plays very important role in the management of infertility. Since ancient times, Garlic is used as an aphrodisiac & to treat the number of diseases. Hence, we are having discussion on Garlic with special reference to its role in the management of fertility.

Causes of infertility pertaining to male are- abnormalities in sperm, penile dysfunction, deficiency in seminal fluid, issues pertaining to senility & various medical disorders. Female infertility may cause due to gynecological disorders (yonovyaapda), infection, weakness, congenital abnormalities, abnormalities of ovum, etc. Psychological factors like anxiety & depression, abnormalities of diet & mode of life, abnormalities of Atma & Satva of embryo are other reasons. These gynecological disorders occur due to vitiation of Vata dosha & if these disorders not treated properly causes infertility. Thus, first of all Vata should be normalized. Ashtanga Sangraha mentioned that the best medicine of Vatadosha is ‘Garlic’. It is hot, sharp, heavy, unctuous & pungent, sweet, bitter, astringent & salty in taste. Therefore, it pacifies all five types of Vata.

Garlic increases Sadhaka pitta & acts as a Medhya & helps in reducing stress, anxiety & depression which are the major factor affecting sexual
desire & can cause amenorrhea & hence affect fertility. Due to its hot properties, it acts as a stimulant, vasodilator & keeps good circulation of blood through male & female reproductive system & therefore useful in menstrual problems, erectile dysfunction & impotency & helps in conception. Garlic is heavy, unctuous, sweet in taste therefore it increases Shukra.

Garlic is described as ‘Mahaaushdhi’ means great medicine because of its power of healing properties. It is rejuvenator, prevent aging, re-establish youth & strengthen life. It is also used as aphrodisiac because it increases libido, quality & quantity of semen & duration of erection. It pacifies Vata Kapha dosha, therefore it prevents or cures all diseases & make men & women fertile.

Due to its antioxidant properties, it improves general health & inhibits premature aging. In proper doses intake of garlic improve seminal fluid, sperm count & balance hormonal level as well & used in uterine & menstrual problems. Garlic detoxifies organ system, induces relaxation & promotes longevity. Thus, Garlic is important herb which helps to cure most of the etiological factors of infertility & used as a fertility enhancer.

4. REFERENCES


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