

Review of Spermatogenic Activity of Gokshuradi Churna and its Extracts

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ABSTRACT

Male reproductive function is highly sensitive to many factors such as physical and chemical agents which leads to infertility. Infertility is defined as the inability of a sexually active, non-contraception couple to achieve pregnancy in one year. (WHO 2000) In 40 to 50 % of cases, a semen analysis can rule out the cause of the abnormality. It can easily determine the total sperm count, motility and morphology of the sperm etc. Many drugs in the market are available but they might produce side effects that cannot be ignored. There are various formulations used as Vajikarana Aushadhi in Ayurveda. Gokshuradi churna is one of such versatile formulation that possesses Vajikaran properties and is used in male infertility. This formulation consists of five herbal ingredients which are Gokshura (*Tribulus terrestris* Linn), Ikshura (*Asteracantha longifolia*), Mash (*Phaseolus mungo*), Atmagupta (*Mucuna prurita* hook) & Shatavari (*Asparagus racemosus*). Hence Gokshuradi churna is selected here, to evaluate its Spermatogenic activity. Gokshuradi Churna is an Ayurvedic formulation mentioned in the ancient classical text Ashtang Hridaya. This formulation consists of five ingredients i.e Gokshura (*Tribulus terrestris* Linn), Ikshura (*Asteracantha longifolia* Nees), Mash (*Phaseolus mungo* Linn), Atmagupta seeds (*Mucuna prurita* Hook) & Shatavari (*Asparagus racemosus* Wild). Many formulations are available in various texts under the same name Gokshuradi Churna with different ingredients and different Rogadhikara.

Keywords- Ayurveda, Spermatogenic Activity, Gokshuradi Churna, Mode of Action of Dravya

INTRODUCTION

Infertility is defined as the inability of a sexually active, non-contraception couple to achieve pregnancy in one year. (WHO 2000) In 40 to 50 % of cases, a semen analysis can rule out the cause of the abnormality. It can easily determine the total sperm count, motility and morphology of the sperm etc. Among all health problems infertility is one of main in today's life. Nearly 10-15 % of the individuals belonging to the reproductive age group are affected by infertility. The rate of infertility is steadily increasing due to change in life style, High pollution, socioeconomic cause, enormous amount of stress and dietary factor Ayurveda is a holistic branch of medicine system which has served humanity since ancient time by both prophylactic and curative Many drugs in the market are available but they might produce side effects that cannot be ignored. There are various formulations used as Vajikarana Aushadhi in Ayurveda. Gokshuradi churna is one of such versatile formulation that possesses Vajikaran properties and is used in male infertility.

Drug Review:

The literature regarding Gokshura, Ikshura, Mash, Atmagupta and Shatavari will be reviewed from different Ayurvedic texts and research articles. Ingredients of Gokshuradi Churna Ayurvedic Pharmacological properties are mentioned in Table No.1, 2 and 3 respectively.

Table No.1: Ingredients of Gokshuradi Churna (P.V sharma 2006)

Contents	Botanical name	Family	Parts used
Gokshura	<i>Tribulus terrestris</i> Linn	Zygophyllaceae	Seeds
Ikshura	<i>Asteracantha longifolia</i> Nees	Acanthaceae	Seeds
Mash	Mash <i>Phaseolus mungo</i> Linn	Leguminosae	Seeds
Atmagupta <i>Mucuna</i> L.	<i>Mucuna prurita</i> Hook	Leguminosae	Seeds
Shatavari	<i>Asparagus racemosus</i> Wild	Liliaceae	Roots

Table No 2: Raspanchak of Gokshuradi churna (P.V sharma 2006)

Drug	Rasa	Guna	Veerya	Vipaka	Karma
Gokshura	Madhura	Guru, Snigdha	Sheeta	Madhura	Vaatpitta shamak, Vrishya Garbhasansthapa,
Ikshura	Madhura	Snigdh, Pichhila	Sheeta	Madhura	Vatapitta shamak, Mutral Vrishya, Rasayana
Mash	Madhura	Guru, Snigdha	Ushna	Madhura	Vatashamak, Vrishya Stanyajanan, Mutral
Atmagupta	Madhura, Tikta	Guru, Snigdha	Ushna	Madhura	Vata shamak, Vrishya, Mutral,
Shatavari	Madhura, Tikta	Guru, Snigdha	Sheeta	Madhura	Vatapitta shamak, Shukral, Stanyajanan

Table No 3: Pharmacological Properties of Drugs (Sharma PC, Database on medicinal plants used in Ayurveda Vol 1, 3, 4, 2005, pg.200, 229, 320, 418)

Drug	Phyto-constituents	Pharmacological Actions
Gokshura	Saponins, Polyphenolic compounds and alkaloids, Furostanol and Spirostanol, Kaempferol	Aphrodisiac, anti-inflammatory, analgesic antispasmodic, antibacterial,
Ikshura	Alkaloids, Saponins, Steroids, Phenolic compounds, Tannins, Flavonoids, Terpenoids, Protein & Amino acids, Anthraquinones	Aphrodisiac, Balya (stamina booster), Shukrashodhaka (purify the semen anomalies), Vatraktahara (useful in gout), Ashmarihara (lithotriptic), Shothahara (anti-inflammatory)
Mash	Genistein, Glycinol Kievitone, Eugenol Beta-sitosterol, Phloretin	Vrishya (Aphrodisiac), Diuretic, Strengthening (balya), Brumhana (bulk prompting), Stanyajanana (galactagogue)
Atmagupta	Steroids, Flavonoids, Tannins-dopa, mucunine, pruriene, palmitic, oleic, linoleic, stearic	Balya (staminabooster) Shukrala (aphrodisiac), Vatavyadhikar (useful in disorder of vata humor)
Shatavari	Steroidal, saponins, Quercetin, Rutin Polysaccharides	Balya (stamina booster), Rasayana (rejuvenation) Vrishya (Aphrodisiac activity) Stanyajanana (galactagogue) Anti-stress activity Anti-inflammatory activity.

Probable Mode of Action of Gokshura Churna-

Gokshura has Madhura rasa (sweet), Guru and Snigdha guna (unctuous and heavy quality), Sheeta Virya (Cold potency), Vrishya (Aphrodisiac), Rasayan (Rejuvenator), Brimhana (Nourishing therapy), and Vatapittahara properties.

Vatapittahara Karma does the Samprapti Vighatana in the Kshina Shukra, as it is a Vata- and Pitta-predominant disease.

However, Madhura Rasa, Snigdha, and Guru Guna increase the Shukra Dhatu qualitatively and quantitatively. Gokshura is known for its utility in Mutravaha Srotas, by correction of the Apana Vata, it exerts action on the Shukra also, along the lines similar to how Shukra Visarga is governed by Apana Vata. Tribulus terrestris contains three groups of active phytochemicals. They are Dioscin, protodioscin, and diosgenin. Protodioscin is a potent natural precursor of the testosterone enhancer. It also increases the production of Testosterone in another natural way. Tribulus leads to the production of the luteinizing hormone (LH). When the LH levels are increased, the natural production of testosterone also increases. LH is a hormone that also deals with sex drive. LH has been used to increase fertility and helps to relieve impotence.

DISCUSSION

Gokshura churna is a traditional herbal formulation that aims at both revitalising and rejuvenating the body. The host of anti-inflammatory and diuretic properties of this formulation makes it extremely beneficial. The classical medicine uses the powdered form of each of five drug that are mixed in equal parts, each of which works together in promoting sexual and reproductive health, improving sexual desire and performance, treating erectile dysfunction and increasing libido and stamina and working as a nonhormonal bio-stimulator which upsurges the level of the male hormone testosterone

CONCLUSION

Gokshura churna is typically effective for improving men's health. The churna has powerful spermatogenic properties that are extremely beneficial for treating hypospermia (low volume of semen), asthenozoospermia (i.e. sperm motility), oligospermia (i.e. low sperm count), teratospermia (i.e. abnormal sperm shape) and enhances spermatogenesis (i.e. sperm production). Being a natural antioxidant, it improves the production of testosterone and luteinizing hormone. It also treats conditions like erectile dysfunction and premature ejaculation.

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