

- Unctuous
- Sweet
- Smelling like honey
- Resembling oil and honey.

Functions of Shukra Dhatu

किंवाधिचिह्निरु उद्विगामीरुप
बर्हिद्वर्हि15६16

According to Charakacharya, the function of Shukradhatu is Garbhotpadana .i.e Reproduction. The shukra dhatu performs this function , when it has above fertile properties.

किंवाधिचिह्निरु उद्विगामीरुप
गर्हिण्णद्विप15६5

According to Sushrutacharya, Semen provides valour, discharge, pleasure, physical strength and reproduction.

बर्हिगर्हिप17६69

When Shukra is vitiated by different doshas it loses its above fertile properties, which may leads to Vandhyatva.(Infertility)

Charakacharya explained the properties of Dosha-Dushitashukra.

शुक्रदूषणकृ.

उद्विगामीरुपिचिह्निरु उद्विगामीरुप
चर्निर्पितकृउद्विगामीरुपिचिह्निरु उद्विगामीरुप
बर्हिद्वर्हि31६140६141

The semen affected by Vata becomes frothy, thin, rough and is ejaculated by difficulty & in little quantity. It has no potency for fertilization. (Vandhyatva). As shukra is snigdha, its fertile properties are dominated by Ruksha gun of vata.

गर्हिण्णद्विगामीरुपिचिह्निरु उद्विगामीरुप
उद्विगामीरुपिचिह्निरु उद्विगामीरुप
बर्हिद्वर्हि30६141६142

The semen affected by Pitta dosha is bluish or yellowish in colour, foetid and is ejaculated with burning sensation. Asshukra is soumya & apamahabhootpradhana, the Ushna Guna of pitta dominates its fertile properties.

शुक्रदूषणकृ
बर्हिद्वर्हि3६६142

When shukra is obstructed in its passage by kapha,it becomes extremely slimy.

Hence when shukra is vitiated by doshas, it loses its fertile properties which may leads to Vandhyatva. (Infertility)

According to modern medicine-

Nature of Semen

Semen is White or grey fluid that contains spermatozoa (sperms). It is collection of fluids from testes, seminal vesicles, prostate gland &bulbo-urethral glands.

Properties of Semen-

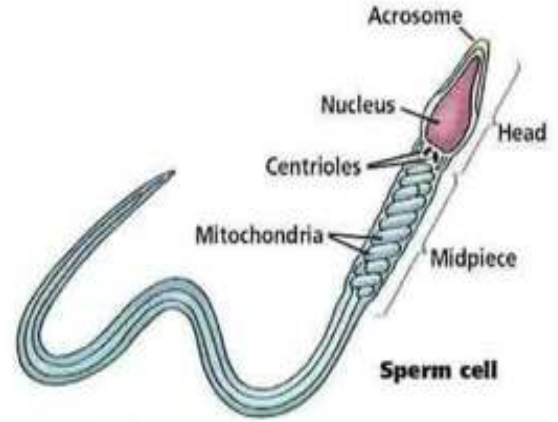
- Sp. gravity- 1.028

- Volume- 2-6 ml / ejaculation
- Reaction- Alkaline with PH 7.5.

Composition of Semen-

Semen contains 10 % of sperms & 90% fluid part, which is called as seminal plasma. Seminal plasma contains secretions from seminal vesicles, prostate & bulbo-urethral glands.

Structure of Spermatozoon



Qualities of semen required for fertility-

- Volume of semen per ejaculation must be at least 2 ml
- Sperm count must be at least 20 millions/ml
- 75 % sperms must be alive.
- 50 % sperms must be motile.
- 30 % sperms must have normal shape& size.

Infertility

Infertility is defined as a failure to conceive within one or more years of regular unprotected coitus.

Primary infertility denotes those patients who have never conceived. Secondary infertility indicates previous pregnancy but failure to conceive subsequently.

Factors responsible for fertility are:

- Healthy spermatozoa should be deposited high in vagina at or near the cervix. (Male factor)
- The spermatozoa should undergo changes (capacitation, acrosome reaction) and acquire motility. (cervical factor)
- The motile spermatozoa should ascent through cervix into uterine cavity and the fallopian tubes.
- There should be ovulation. (ovarian factor)
- The fallopian tubes should be intact.
- The embryo should reach in uterine cavity in 3-4 days of fertilisation.

Causes of Infertility-

Conception depends on the fertility potential of both male & female partner. The male is directly responsible in about 30-40 %, the female in about 40-55 % and both is responsible in about 10 % cases.

Faults in male

- Defective spermatogenesis
- Obstruction in the efferent duct system.
- Failure to deposit the sperm high in vagina.
- Errors in seminal fluid.

Common causes of male infertility

Pre testicular	Testicular	Post testicular
<ul style="list-style-type: none"> • Endocrine • Gonadotropin deficiency • Thyroid dysfunction • Psychosexual • Erectile dysfunction • Impotence • Drugs • Antihypertensive • Genetic • 47 xxy 	<ul style="list-style-type: none"> • Cryptorchidism • Varicocele • Primary testicular failure 	<ul style="list-style-type: none"> • Obstruction of efferent duct- • Young's syndrome • Tuberculosis, gonorrhoea • Hypospadias • Vasectomy • Bladder neck surgery

Pathologic conditions of Semen

1. Azoospermia- It is lack of Sperms in Semen. It is congenital diseases also caused by excess use of steroids & androgens.
2. Oligozoospermia- It is low sperm count with less than 20 million/ml of semen. It causes infertility.
3. Teratozoospermia- It is abnormal morphology of sperms. It is seen in diseases like crohnsdise, hodgkinsdise. It may leads into infertility.
4. Aspermia It is lack of semen. It occurs in retrograde ejaculation. It may lead into infertility.
5. Haemospermia- It is presence of blood in semen. It occurs due to infection of prostate or urethra.

DISCUSSION

Discussion regarding Ayurvedic literature-

- The basic function of Shukradhatu is Garbhotpadana, i.e reproduction.
- The shukravahastrotas is responsible for Utpatti, parinaman and Vahan of Shukradhatu. To achieve the function of reproduction, the shukravahastrotas should be in healthy state. Any deformity in shukravahastrotas may leads to diseases or infertility.
- When shukra is vitiated by different doshas, it loses its fertile properties & leads to infertility or different diseases.

Discussion regarding modern science-

- The modern science has explained the properties of fertile semen.
- The fertile semen should have the sperm count between 100-150 million/ml. The PH should be alkaline with PH of 7.5. Volume of Semen must be at least 2 ml. The 50% sperm must be motile.30% sperms must have normal shape and size.
- The defective spermatogenesis may lead into oligospermia. The. The sperm count decreases due to disruption of seminiferous tubules or acute infections of testis.
- Sometimes the sperm count may be normal but the structure of the sperm may be abnormal. The sperm may be without tail and non-motile.

- Obstruction of reproductive ducts like vas deference also leads into infertility.
- Other conditions includes trauma, mumps, disorders of hypothalamus, pituitary, thyroid, pancreas, may leads into infertility.

CONCLUSION

- According to Ayurveda Shukravaha Strotas must be healthy as all body elements are formed in Strotas. So healthiness of fertile semen depends upon Shukravaha Strotas. Asshukravaha Strotas get vitiated by vitiated Doshas, that leads into vitiation of shukra which may leads into infertility and other disorders of shukradhatu.
- The primary function of shukradhatu is Garbhotpadana, and for that perpose shukradhatu must consist its all fertile properties.
- When shukradhatu gets vitiated by vitiated doshas, Shukradhatuloses its fertile properties, which may leads into Vandhyatva(Infertility).
- According to modern science the fertility of sperm depends upon the process of spermatogenesis, and healthy status of reproductive organs.
- When the spermatogenesis gets hampered, that may lead Infertility and oligospermia. Also obstruction of vas deference leads into infertility.

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Source of support: Nil, Conflict of interest: None Declared