

Role of Semen analysis in current Ayurveda medical practice

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Abstract

Semen analysis is a widely used diagnostic tool in modern medicine to evaluate male fertility, providing measurable data on sperm count, motility, morphology, and other seminal parameters. In contrast, Ayurveda views Shukra Dhatu not only as the reproductive tissue but also as a vital essence responsible for strength, immunity, and overall vitality. Bridging these two perspectives offers an opportunity to enhance understanding and improve treatment outcomes in male infertility. To explore the clinical relevance of semen analysis in contemporary Ayurvedic practice and interpret its findings using classical Ayurvedic principles such as Shukra Guna, Tridosha, and Ashta Shukra Dushti.

This study involved a comparative review of classical Ayurvedic texts and modern scientific literature. Parameters from semen analysis like volume, viscosity, motility, morphology, and sperm count were examined in light of Ayurvedic concepts such as Shuddha Shukra and Shukra Dushti. Clinical correlations were made to understand how specific dosha imbalances may reflect in semen reports and influence Ayurvedic treatment planning. Modern semen abnormalities often present parallel features described in classical Shukra Dushti. For example, oligospermia may reflect Shukra Kshaya or Vata aggravation, while increased viscosity could indicate Kapha dominance. These correlations help align modern diagnostic findings with Ayurvedic interpretation, guiding the use of therapies like Rasayana, Basti, and Ghrita formulations.

Viewing semen analysis through an Ayurvedic lens enhances diagnostic clarity and supports evidence-based, individualized treatment. This integrative approach enables monitoring of treatment progress while staying rooted in Ayurveda holistic framework. By combining ancient insights with modern diagnostics, clinicians can offer more effective, personalized care in male infertility.

Introduction

Ayurveda, the ancient system of medicine, emphasizes balance among the three fundamental Vata, Pitta, and Kapha as well as the proper nourishment of the seven bodily tissues or Dhatus.

Among these, Shukra Dhatu, the reproductive tissue, holds special importance. It is not only responsible for reproduction but is also considered a vital contributor to strength, immunity, vitality, and overall well-being. Classical texts like the Charaka Samhita and Sushruta Samhita describe Shukra as the most refined and final essence of the body's metabolic processes, and they evaluated its quality based on physical traits such as colour, consistency, smell, and its ability to aid conception.

In today's world, infertility has emerged as a growing health concern, with male factors contributing to nearly half of the cases. In modern medicine, semen analysis has become a standard and reliable tool to assess male fertility. It provides detailed information about sperm count, motility, morphology, and volume data that help in identifying the underlying causes of infertility and guiding suitable treatment options.

Incorporating semen analysis into Ayurvedic practice can enhance diagnostic precision and help monitor treatment progress without compromising Ayurveda's core principles of holistic and natural healing. As the healthcare field increasingly embraces integrative approaches, combining laboratory data with Ayurvedic concepts such as Shukra Dushti opens up new possibilities for more individualized and effective care. Such integration not only helps practitioners understand the condition better but also strengthens confidence in treatment outcomes, both for doctors and patients.

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Brief Anatomy of the Male Reproductive Tract¹

The male reproductive system consists of the testes, epididymis, vas deferens, and accessory glands including seminal vesicles, prostate, bulbourethral, and urethral glands.

- Testes: Produce spermatozoa in seminiferous tubules and secrete testosterone via Leydig cells. Sertoli cells, under FSH control, regulate spermatogenesis and produce inhibin.
- Epididymis: Stores and matures sperm, gaining motility through proteins like epididymal motility factor.
- Vas deferens: Transports sperm to the ejaculatory duct, joins the duct of seminal vesicle.
- Seminal vesicles: Contribute 46–80% of semen volume; secrete fructose, prostaglandins, and a fibrinogen-like substance.
- Prostate: Adds 13–33% of semen volume; secretes enzymes like

vesiculase (for coagulation) and spermine (bacteriostatic).

- Bulbourethral glands: Secrete mucoproteins to lubricate the urethra.

Semen Composition

Table 1: Semen is a mixture of sperm and glandular secretions:

Source of secretion	% Ejaculate
Testis	5
Seminal vesicles	46-80
Prostate	13-33
Bulbourethral and urethral glands	2-5

Interpretative Semen Analysis

Table 2: Physical examination

Test	Normal findings	Abnormal values and clinical conditions
Colour & Appearance	Greyish white, Viscid, Opaque	Increased turbidity may be associated with inflammatory process in some part of reproductive tract.
Viscosity	Normal viscosity can be poured drop by drop	Increased viscosity – Poor invasion of the cervical mucus Absence of viscosity – points to reduce cell content.
Volume	2-5 ml	Lesser amounts may arouse suspicion of deficiency and premature weakening of Sperm by vaginal acidity.
Liquefaction time	20-30 minutes	Failure to liquefy within 30 minutes may be associated with infertility. The semen from males with bilateral congenital absence of the vas deferens and seminal vesicles fails to coagulate due to absence of coagulation substrate

Table 3: Chemical examination

pH	7.2-7.8	Less than 7.0 are frequently associated with semen consisting largely of prostatic secretion due to congenital aplasia of vas deferens and seminal vesicles.
Fructose	Present 150-300 mg/dl	Disorders of seminal vesicle may lead to reduction in fructose concentration. Absence of fructose results in immobile sperm formation.

Table 4: Microscopic examination

Sperm count	15-300 million/ml	Azoospermia - Complete absence of spermatozoa Oligozoospermia - a reduced number of spermatozoa Clinical Condition - Mumps orchitis, Prostatitis, Occlusion or absence of efferent ducts, Hypopituitarism, Hypogonadotropic hypogonadism, Hyper-hypothyroidism and in Oestrogen secreting tumour.
Motility after 2Hrs, 3Hrs, 6Hrs	60-95%	Motile forms decrease by about 5% per hour after the fourth hour following collection. Motility less than 60% may be associated with infertility.
Abnormal forms	0-20%	More than 20% abnormal form may be associated with infertility. Following abnormalities in spermatozoa are observed Heads - Too small, too large, Double head, pointed head, ragged heads. Middle piece - absent, bifurcated or swollen. Tails - double, curved, rudimentary or absent

Table 5: Other findings

Pus cells	1-2/hpf	Increased number - inflammation due to infection in some part of reproductive system.
Epithelial cells	1-2/hpf	Increased number - not significant.
Red blood cells	1-2/hpf	Tuberculosis of seminal vesicles, rupture of blood vessel, infection prostate, vitamin C deficiency
Trichomonas	Absent	Trichomonas infection

Shukra

- One among the Sapthadhatus.²
- Shukra dhatu is formed through sequential process where each dhatu nourishes the next, starting from Rasa and culminating in Shukra.

Location of Shukra³

- Shukradharakala is present all over the body.
- Just like ghee is present in milk, Sugar present in sugarcane in a similar shukradharakala is present all over the body.

Physical properties of Shukra⁴

Shukra is characterized by several physical properties: it is Snigdha (unctuous), Ghana and Picchila (thick and slimy), Madhura (sweet), Avidahi (soothing and non-burning), Bahala (copious and dense), and Guru (heavy).

Shuddha Shukra lakshana⁵

The purity of Shuddha Shukra can be assessed by its distinct physical characteristics: it has the lustre of a crystal (sphatikabha), is liquid and unctuous in nature (drava and snigdha), possesses a sweet taste and sweet smell (madhurarasa and madhuragandhi), and has a consistency resembling that of oil and honey (taila-kshoudra-nibha)

Shukra dhatu parinamana kala⁶

According to Sushruta, it takes approximately one month for Rasa Dhatu to be transformed into Shukra Dhatu. In contrast, the Aṣṭāṅga Hṛdaya states that this transformation can occur in as little as six days and up to one month.

Shukravaha srotas

According to Charaka Shukravahasrotasmula is Vrsana and Sepha (Testis and external genitalia)

Shukrapramana

The measure of Shukra (Shukra Pramāṇa) is said to be approximately half an Anjali in volume.

Shukra karma⁷

Shukra is primarily responsible for Garbhotpādana (the formation of the embryo) and also plays a vital role in maintaining various aspects of health and well-being. It contributes to Dhairya (courage), Chyavana

(delaying the effects of aging), Priti (affection or compassion), Dehabala (physical strength), Harṣha (pleasure or happiness), and Bijārtha (reproduction or fertility).

Shukravaha srotodushti karana⁸

The causes of Shukravaha Srotodushti include: Akalayonigamana (engaging in unnatural or perverse sexual activities), Nigrahāt Maithuna (suppressing the natural urge for sexual intercourse), Ati Maithuna (excessive indulgence in sexual activity), and Shastra-Kshara-Agni (improper use of surgical procedures, alkaline substances, or cauterization therapies).

Factor causing Shukra kshaya⁹

The factors responsible for Shukra Kshaya include: Jarā (old age), Chintayā (excessive worry or mental stress), Vyādhībhiḥ (chronic or severe illnesses), Karma-karṣana (overexertion due to physical labor or activity), Anāśanāt (prolonged fasting or undernourishment), and Strīṇām Ati-niṣevanāt (excessive sexual indulgence).

Shukra kshaya lakshana¹⁰

The signs and symptoms of Shukra Kshaya (depletion of reproductive tissue) include: delayed ejaculation (Shukra chiraat prasichyet), haematospermia or presence of blood in semen (Shukra Shoṇitam), severe pain in the testes and external genitalia (Toda atyartham vṛṣaṇayoḥ meḍhram), burning sensation in the genital region (Dhūmayateeva), general debility (Daurbalya), dryness of mouth (Mukha Shoṣa), pallor or loss of skin tone (Pāṇḍutva), fatigue (Shrama), and sexual impotence (Klibatva/Kalibya).

Shukra vruddhi lakshana¹¹

The signs of Shukra Vṛddhi (increase or abnormal accumulation of Shukra) include Ati streekamata (excessive or uncontrollable sexual desire) and the formation of Shukrashmari (seminal calculus or stone formation in the reproductive tract).

Shukra pradoshaja vikara¹²

The disorders resulting from Shukra Pradoshaja Vikāra (imbalances or disorders caused by Shukra) include: Klibatva (sexual impotence), Aharṣaṇa (inability to penetrate despite erection), Alpayu (short-lived progeny or offspring with a limited lifespan), Virūpa (congenital abnormalities in the offspring), Na cha

asya jayate (failure to conceive or inability to produce offspring), and Patati prasrāvatyapi (spontaneous abortion or miscarriage).

Ashta shukra dosha¹³

According to Charaka Samhita, the Ashta Shukra Doṣha (eight disorders of Shukra) are characterized by the following qualities: Phenila (frothy), Tanu (very thin), Rukṣha (dry), Vivarnam (discolored), Puti (putrid or foul-smelling), Picchila (slimy), Anya Dhatu Saṁsruta (mixed with other bodily tissues or dhatus), and Avasadi.

According to Vagbhāṭa, these disorders are also classified into different types based on their dosha origin, including Vātaja (caused by Vata), Pittaja (caused by Pitta), Kaphaja (caused by Kapha), Kunapa (putrid or decayed), Granthi (characterized by lumps or swelling), Puya (pus-like or infected), Ksheena (weak or diminished), and Malahyam (contaminated with waste or impurities).

Materials

Classical Ayurvedic texts and contemporary medical laboratory science books were referred to as primary sources for this study.

Methods

Interpretation of semen analysis in light of ayurveda shukra guna, ashta shukra dosha and tridosha.

To bridge modern semen analysis with Ayurveda understanding, we must correlate physical, chemical and microscopic characteristics of semen with Shukra Guna (qualities of healthy semen) Astha Shukra Dosha and the influences of Tridoshas. This approach allows a deeper interpretative analysis and understanding of male fertility from both scientific and Ayurveda viewpoints.

Table 6: Physical examination

Parameters	Normal findings	Shukra Guna/ Shuddha Shukra Lakshana	Dosha imbalance interpretation / Asta Shukra Dosha
Colour and Appearance	Greyish white, Opaque is normal. increased turbidity may indicate infection.	Sphatikabha (Crystal like lustre), Snigdha (unctuous)	Turbidity → Pitta aggravation (Inflammatory/infection) Anyadhatusamsrasta (Haematospermia) Vivarna (Discoloured)

Viscosity	Normal viscosity can be poured drop by drop.	Picchila (slimy), Taila-Kshoudranibha (like oil and honey) Ghana(thick)	Increased viscosity →Kapha aggravation. Low viscosity → Vata aggravation, Tanu dosha (thin) or Ruksha dosha (dry)
Volume	2-5ml	Bahala (copious), Guru(heavy)	High volume → kapha aggravation, Bahala or Guru dosha
Liquefaction time	20-30 min	Picchila(slimy), Ghana(thick), Snigdha(unctuous), Drava(fluid), Taila kshoudranibha (like oil or honey)	Delayed liquefaction → Kapha aggravation, Picchila dosha, Granthi dosha Immediate/absent coagulation → Vata aggravation

Table 7: Chemical examination

Parameters	Normal findings	Shukra Guna/ Shuddha Shukra Lakshana	Dosha imbalance interpretation / Asta Shukra Dosha
pH	7.2-7.8 Lower pH- suggest prostatic dominance, Higher is normal.	Avidahi (non-burning), Madhura (sweet)	Acidic pH (<7) → Pitta aggravation, Pooti dosha. Too alkaline → Vata aggravation
Fructose	150-300mg/dl Essential for sperm motility, Absence – Seminal vesicle dysfunction	Madhura rasa, Guru, Snigdha Fructose gives nutrition essential for sperm motility and vitality.	Low fructose → Vata-Pitta aggravation, Avasadi dosha, Ruksha dosha

Table 8: Microscopic examination

Parameters	Normal findings	Shukra Guna/ Shuddha Shukra Lakshana	Dosha imbalance interpretation / Asta Shukra Dosha
Sperm count	15-300 million/ml	Bahala (Copious), Guru (Dense/ Heavy)	Low count (Oligozoospermia)→ Vata aggravation (Dryness, Depletion), Pitta aggravation (burning tissues), Ksheena dosha. Azoospermia → Severe Vata aggravation
Motility	60-95% Reduce motility affects fertility.	Drava (fluid), Snigdha(unctuous)	Good motility → Drava guna Low motility → Kapha aggravation.
Abnormal forms	< 20%		High percentage of abnormal sperm → Vata and Pitta aggravation

Table 9: Other findings

Parameters	Normal findings	Shukra Guna/ Shuddha Shukra Lakshana	Dosha imbalance interpretation / Asta Shukra Dosha
Pus cells	1-2/hpf	-	Inflammation suggest Pooti dosha
Epithelial cells	1-2 /hpf	-	High number suggest Anyadhatu samsrusta
Red blood cells	1-2/hpf	-	Blood in semen (Haemato spermia) implies Anya dhatu samsrusta
Trichomonas	Absent	-	Infection aligns with Pootidosha, Anydhatu samsrusta, Malahyamdosha, Kunapa dosha

Bheeja, Bheejabhaga, Bheejabhagavyava and Sperm DNA Fragmentation

Charaka Samhita gives a profound explanation of congenital abnormalities based on the concepts of Bheeja (seed), Bheejabhaga (part of the seed), and Bheejabhagavyava (sub-part or organelle of the seed)¹⁴. These can be meaningfully correlated with modern genetics, particularly with the concept of sperm DNA fragmentation (SDF).

1. Bheeja – Refers to the entire reproductive unit (like sperm or ovum).
2. Bheejabhaga – Denotes a part of the reproductive unit, interpreted as genetic material or chromosomes.
3. Bheejabhagavyava – Refers to subdivisions or organelles of bheejabhaga, closely correlating with genes or DNA segments.

When these are vitiated by internal or external factors, the resultant fetus may be:

- Vandhya (infertile)
- Putipraja (non-viable fetus)
- Trinaputrika/Varta (intersex or ambiguous genitalia)

Sperm DNA Fragmentation Test ¹⁵

Sperm DNA fragmentation (SDF) refers to breaks or lesions in the DNA strands within sperm cells. These breaks can be single-stranded or double-stranded and may compromise the integrity of the paternal genetic material. Unlike somatic cells, mature spermatozoa lack effective DNA repair mechanisms, so any damage present typically persists and may impair fertility outcomes.

Mechanisms Leading to SDF

There are three primary mechanisms that contribute to DNA fragmentation in sperm:

1. Abortive Apoptosis: Incomplete apoptosis during spermatogenesis leads to the release of sperm with fragmented DNA.
2. Defective Chromatin Remodeling: Inadequate replacement of histones with protamines results in improperly condensed chromatin, making DNA more susceptible to damage.
3. Oxidative Stress: Excessive reactive oxygen species (ROS) can damage sperm DNA during or after spermatogenesis.

Clinical Significance of SDF

SDF has been associated with:

- Reduced natural conception rates
- Increased risk of recurrent pregnancy loss (RPL)
- Lower success rates in assisted reproductive techniques (ART) like intrauterine insemination (IUI), in vitro fertilization (IVF), and

intracytoplasmic sperm injection (ICSI)

- Higher miscarriage rates, especially in ICSI cycles with ejaculated sperm

Interpretation of SDF Test Results

The interpretation of SDF test results can vary depending on the assay used and clinical context. However, some general thresholds have been proposed:

- Low SDF (<15%): Generally considered normal and associated with higher fertility potential.
- Moderate SDF (15–30%): May indicate subfertility; clinical correlation is necessary.
- High SDF (>30%): Associated with reduced fertility potential and may warrant further evaluation or intervention.

It's important to note that these thresholds are not universally standardized, and interpretation should consider individual patient factors and clinical scenarios.

Discussion

Combining Semen analysis with Ayurvedic principles can provide a more comprehensive approach to diagnosing and treating male infertility, offering personalized treatments that address both symptoms and root causes. This integration bridges the gap between modern science and traditional practices, enhancing reproductive health outcomes

Viscosity

If the viscosity of semen increases, it can be understood as a manifestation of aggravated Kapha dosha. To reduce this aggravated Kapha, Lekhaniya Dravyas (herbs with scraping and reducing properties) can be used. Formulations like Chandraprabha vati, Gomutra haritaki and Gokshura are beneficial in this context due to their Teeksha guna, which will help in reducing excess Kapha.

A decrease in the viscosity of semen is due to aggravated Vata dosha, as Vata is Ruksha, Laghu and Chala in nature, leading to reduce unctuousness and stability of semen. To balance this aggravated Vata, Ghrita preparation are ideal due to their Snigdha, Guru, and Madhura properties, which pacify

Vata and nourishes the reproductive tissues. Formulations such as Kalyanaka Ghrita, Mahakalyanaka ghrita, Phala ghrita and Dhanvantara ghrita are especially beneficial.

Liquefaction time

In cases where liquefaction of semen is delayed due to the presence of Picchila Dosha, it is understood that the process of Vilayana Karma (liquefaction) should be promoted using substances with Ushna Veerya (hot potency). However, care must be taken to ensure that the sperm itself is not harmed by the excessive heat. Therefore, drugs possessing both Ushna Veerya and Rasayana (rejuvenating) properties—such as Soubhagya Shunti and Dashamula Rasayana—are administered to support liquefaction without compromising sperm vitality.

When semen undergoes immediate liquefaction, it is usually due to Kleda Vriddhi (increased moisture) and an aggravation of Sara Guna (fluidity), indicating a Kapha-dominant pathology. This condition is comparable to Kaphaja Prameha in terms of Dosha involvement and Kleda excess. Therefore, it should be managed using principles similar to those applied in Kaphaja Prameha, with the administration of drugs like Shilajit Rasayana, Suvana Malini Vasant, and Vasant Kusumakar Rasayana, which possess Rasayana, Stambhana, and Kapha-Medohara properties to stabilize and restore the quality of semen.

Seminal calculi are managed by Sheegrumoola Kashaya and Veerataradi Kashaya due to their combined actions of Shothahara (anti-inflammatory), Srotoshodhana (channel-cleansing), Ashmarighna (stone-dissolving), and Shukrala (semen-enhancing) properties, which help in breaking down the calculus, reducing inflammation of the seminal tract, clearing obstructed seminal pathways, and restoring normal flow and quality of Shukra dhatu.

pH

When the pH of semen is low, indicating increased acidity, it can lead to symptoms such as Daha (burning sensation). This acidic nature may irritate the urogenital tract and affect semen quality. In such cases, treatment should aim to reduce Daha, balance Pitta, and restore normal semen pH. Uttara Basti is an effective therapy in this context, using medicines like Vidaryadi Ghrita, Dhanvantara Ghrita, and Chandraprabha Vati, which have Pitta-shamaka, Vrishya, and Rasayana properties to soothe inflammation, nourish reproductive tissues, and normalize semen consistency and function.

When the pH of semen is high, it indicates increased alkalinity, which corresponds to Kshara properties. Excess Kshara can cause tissue irritation and impair the stability of Shukra Dhatu. To counterbalance this, Amla Dravyas (acidic substances) are used, as the combination of Kshara and Amla can lead to a state of Madhura (neutralization or balance), which is more conducive to Shukra health. Formulations like Panchagavya Ghrita, Mahatikta Ghrita, and Triphala Ghrita are effective in this context, as they possess Amla, Madhura, and Ropana (healing) properties.

Fructose

When fructose content in semen is reduced, it indicates a deficiency in nutritive support and energy for sperm, which is associated with Vata Vriddhi, as Vata governs movement and dryness. This can lead to issues such as decreased sperm motility and vitality. To manage this, Vata-pacifying and Brimhana (nourishing) therapies are essential. Formulations like Vanari Gutika and various Avaleha Kalpanas (herbal jams) are effective, as they possess Vata-shamaka, Vrishya (aphrodisiac), and Rasayana properties, helping to restore semen quality by improving nutrient content and stabilizing Vata.

Sperm Count

In oligospermia, when Vata is reduced or becomes hypoactive, its essential physiological functions—particularly Vibhajana (cell division), which is critical for spermatogenesis—are hampered. This disruption in Vata Kriya can lead to decreased sperm production. To restore normal Vata function without further aggravating it, Yapana Basti is administered using ingredients like Gokshura and Punarnava, which help normalize Vata, support reproductive tissue, and promote Shukra Dhatu formation through their Rasayana and Shukrajanana properties.

Azoospermia, particularly when associated with Beejadushti (defect in the sperm or reproductive seed), is a deep-seated condition involving Shukra Dhatu Dushti. Beejadushti is mentioned in classical texts like the Charaka Samhita ^[16], where Acharya Charaka identifies defective Beeja, Beejabhaga, or Beejabhagavayava (components of sperm or ovum) as causes of Vandhyatva (infertility). Since Shukra Dhatu is the basis of Beeja, its nourishment and purification are essential for correction of this pathology.

In such cases, therapies that deeply nourish the reproductive tissue and correct Dhatu defects are advised. Among them, Yapana Basti is considered a superior therapeutic procedure for conditions involving Shukra Dushti, as mentioned in Chikitsa Sthana of Charaka and in the Basti Adhyaya of Ashtanga Hridaya. Yapana Basti provides both Shamana (pacification of Doshas) and Brimhana (nourishment) effects.

- Punarnavadi Yapana Basti is known for its Mutrala (diuretic), Shothahara (anti-inflammatory), and Shukrajanana properties.
- Atmaguptadi Yapana Basti, containing Atmagupta (*Mucuna pruriens*), is especially indicated for Vrishya and Beeja Vardhana actions, as highlighted in Bhavaprakasha and Rasa Tarangini.
- Mamsarasa-siddha Yapana Basti utilizes meat soup to provide deep Brimhana, as suggested in Ashtanga Hridaya, which is critical when tissue-level regeneration is required.

These formulations act at the level of Moola Dhatu (basic tissue level), helping in regeneration of functional sperm and rectifying genetic or structural abnormalities when possible. They are often administered as part of a broader Rasayana-based treatment protocol for male infertility.

In Ayurveda, Shukra Janana (semen promoting) and Shukra Shodhana (semen purifying) are important components for managing semen quality and sperm count. According to Charaka Samhita¹⁷, the following herbs are considered useful for promoting semen (Shukra Janana):

1. Jivaka (*Microstylis wallichii*)
2. Rishabhaka (*Microstylis* species)
3. Kakoli (*Lilium polyphyllum*)
4. Ksheerakakoli (*Lilium* species)
5. Mudgaparni (*Phaseolus trilobus*)
6. Mashaparni (*Teramnus labialis*)
7. Meda (*Polygonatum verticillatum*)
8. Vriddharuha (*Asparagus racemosus*)
9. Jatila (*Nardostachys jatamansi*)
10. Kulinga (*Abrus precatoris*)

These are included in the Maha Kṣhaya Ganas used to promote Shukra and increase sperm count, though their usage depends on the availability of these herbs.

For Shukra Shodhana (semen purification), the following herbs are recommended in Charaka Samhita.

1. Kushtha (*Sasurrea lappa*)
2. Elavaluka (*Prunus cerasus*)
3. Katphala (*Myrica nagi*)
4. Samudraphena (*Sepia officinalis*)
5. Kadambaniryasa (*Anthocephalus cadamba*)
6. Ikshu (*Saccharum officinarum*)
7. Kanda Ikshu (*Saccharum spontaneum*)
8. Ikshuraka (*Asteracantha longifolia*)
9. Vasuka (*Calotropis procera*)
10. Ushira (*Vetiveria zizanioides*)

These herbs are used for purifying the semen, helping to cleanse

and rejuvenate the reproductive tissues

Red Blood cells in Semen

When Shukra (semen) is mixed with Rakta (blood), it indicates a pathological condition suggestive of Adhoga Raktapitta—a downward flow of vitiated blood due to aggravated Pitta affecting the Shukravaha Srotas. This condition typically arises from excessive heat (Ushna) and Tikshna properties of Pitta. Management is based on principles of treating Adhoga Raktapitta, where the goal is to pacify Pitta and support the integrity of reproductive tissues. Formulations such as Vasavaleha, Patolamula Avaleha, Chandraprabha Vati, and Ushirasava are effective in this context due to their Pittashamaka, Raktaprasadana, and Shothahara properties, helping to stop bleeding, purify the blood, and restore the balance of Shukra and Rakta.

Conclusion

- **Integrating Modern and Traditional Approaches:** The combination of modern semen analysis with Ayurvedic practices presents a unique opportunity to improve the diagnosis and treatment of male infertility while maintaining the holistic and natural principles of Ayurveda.
- **Enhancing Diagnosis:** Modern semen analysis provides a precise and scientific understanding of male reproductive health, measuring parameters such as sperm count, motility, morphology, and semen volume. This helps in diagnosing conditions like azoospermia, oligospermia, and teratozoospermia, which are essential in assessing male infertility.
- **Tracking Treatment Efficacy:** The inclusion of semen analysis in Ayurvedic practice enables the evaluation of how well Ayurvedic therapies are improving reproductive health. This helps in monitoring the effects of herbs, lifestyle changes, and detoxification practices on semen quality, offering a bridge between empirical scientific measurements and Ayurvedic treatment.
- **Shukra Dhatu and Semen Quality:** Ayurveda's emphasis on Shukra Dhatu, the

reproductive tissue responsible for fertility, aligns with modern insights into the quality of semen. Both disciplines stress the importance of maintaining the purity, consistency, and quantity of semen for healthy reproduction.

- **Understanding Imbalances and Doshas:** Ayurvedic principles of Tridosha (Vata, Pitta, Kapha) and Shukra Dhatu Dosha imbalances offer a framework for interpreting abnormalities in modern semen analysis.
- **Holistic Fertility Solutions:** By combining modern investigative tools with Ayurveda's detailed understanding of Shukra and its properties, practitioners can provide more comprehensive fertility treatments. Modern diagnostics complement Ayurvedic approaches by pinpointing the specific physiological issues

affecting semen, while Ayurvedic treatments address the root cause through personalized and natural remedies.

- **Reproductive Health Beyond Fertility:** Ayurveda not only focuses on fertility but also on overall well-being, vitality, and longevity, which are deeply intertwined with the health of Shukra Dhatu. Modern investigations allow a broader understanding of male reproductive health, incorporating insights from both perspectives to enhance long-term health.

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