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"TO IDENTIFY THE TYPES OF SEMEN ACCORDING TO THEIR MORPHOLOGY, MOTILITY AND PARAMETERS"

Pooja Sahu[1] & Dr. Ashish Tamrakar[2]

[1]Research Scholar, Rungta Educational Campus, C.G, Ganjpara, Durg, Chhattisgarh, India

[2]Associate Professor, Rungta Educational Campus, C.G, Ganjpara, Durg, Chhattisgarh, India

ABSTRACT

In the past era, males are very energetic and their potential and sporty power is also good. They do their work by themself. According to their work their food are also well and unhygienic and they wear soft and comfortable clothes. But in current era, for all the work they are fully depend on machines and technology. For any field machines and technology are present for the better work performance. So the potential and sporty power of male is decreases day by day. They do less hard work so their appetite power is also decreases. We can see the effect of this reduction of potential and sporty power and appetite power of the male in their semen cycle period. According to live data, nowadays IVF [In Vitro Fertilization] and IUI [Intro Uterine insemination] cases are increases because semen are effecting due to the environmental factor, life cycle, drug, dehydrated food.In this article we are going to discuss about the Semen. What is Semen, What is the Semen Analysis,How the semen are evaluate, What is the type of semen, How the semen are effecting due to the human daily life cycle. Semen is useful in fertility of the women's egg. This paper defines us that how convenience food are heavy in the health of the male reproductive system. The methodology of this paper defines that the semen of a male are belongs to which type of semen.

KEYWORDS: *Era, Potential, Unhygienic, Performance, Appetite Power, IVF, IUI, Environmental Factor, Dehydrated Food, Convenience Food*

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INTRODUCTION

Rapid developments have occurred in the management of the couple infertility due to a male factor. These have stimulated renewed interest in semen analysis, which has become more correct, more reliable and more in formative[1].Male factor account for about half of the 70 million case of infertility making semen analysis crucial in determining male fertility potential. Fertility defines the rate of reproduction and ability to propagate generations, though it is declining globally for the last two centuries [2].According to research, in the past century, human are hard worker because in that time machines and technology are not available. So they do their work themselves. As their work they need that much like food. Their food was also healthy and unhygienic. They get all nutrition from their food. They does not sick soon because their food and work are good and great. They does not use medicine or chemical drug but in current century human are depend on the machine and technology. They eat sometimes healthy food and most of the time unhealthy food. They used machine and

technology for their work so they spend less power to do their work for that reason their food quantity are also decreases. They are also depending on chemical drug and medicine even they takes medicine in small weakness. This things are effecttheir semen. For that reason nowadays they are facing semen problems.

What is Semen?

Semen also known as Seminal Fluid, is an organic bodily fluid. It is produce by the sexual organs of male. It is used to fertilize the women eggs or ovum. The process that results in the discharge of semen from the penis is called ejaculate. In semen not only spermatozoa are present but proteolytic, enzymes, fructose are also present.

How the Semen is Created?

In the mature human male, Sperm cells are produced by the Testis. In testis several tubules & glands are present.

Sperm are bathed in fluids produced and secreted by the tubules and glands. After passes from the testis sperm are stored in Epididymis, where sperm gets Potessium, Sodium and Glycerylphosphorylcholine they all are energy source for sperm. In the Epididymis, sperm are mature.

After epididymis sperm are passing through a long tube called Ductus Deferens or Vas Deferens to Ampulla. The Ampulla secretes yellowish fluid, ergothioneine and fructose. Here Ergothioneine is a substance that reduce chemical compound and Fructose is a sugar that nourishes the sperm.

During the process of ejaculation, liquid from the Prostate Gland and Seminal Vesicles are add , which help to dilute the concentration of sperm.

The Prostate Gland secretes mainly citric acid, acid phosphatose, calcium, sodium, zinc potassium, protein splitting enzymes and fibrolysin [enzymes that reduces blood and tissue fibers].

A small amount of liquid is secreatedby the Bulbourethral and Urethal Gland. It is thick and clear and it known as Muscus.

Assessment of male fertility is based on the evaluation of sperm. Semen evaluation measures various sperm quality parameters as fertility indicators [3]. Semen should have a relatively uniform, opaque appearance indicative of high sperm cell concentration. The fluid is adapted to be discharge in vagina, so the spermatozoa can pass into the uterus and form a zygote an egg.

How the Semen are Effecting due to the Human Daily Life Cycle?

Semen of a male are effecting due to the daily life cycle because their convenience food, working in heat places, wearing too much hot clothes like jeans, trousers, excessing use of tobacco, alcohol, smoking. Semen are create in testis and testis is the heat organ of the male body. But mostly male are wearing the jeans and sweat pants for that testis heating level are increases, when the testis heat increase the sperm count are decreases. A male person need to take care for their testis for that they need to eat healthy and hygienic food, do exercise daily, leave the uses of smoke, alcohol, increase their immunity power. Semen also effect due to the heat and chemical drug.

What is Semen Monitor?

A semen monitor or semen analysis is a lab test that examines a sample of semen under a microscope. It evaluates certain characteristics of male's semen and sperm present there in. The reason of the semen analysis is increasing the rate of infertility cases and damages of sperm in semen. Semen monitor includes Microscopic Parameter, Motility and sperm morphology. In microscopic parameter we calculate the sperm present in semen. In motility we observe the progressive and non-progressive sperm. In morphology section we calculate the normal and abnormal sperm. It is the complex test and done by the andrologist in the andrology lab. The test of the semen monitor is very vast so we should have to follow this very carefully.

Motility assessment involves subjective estimation of the viability of spermatozoa and the quality of the motility. Evaluation of sperm motility is conducted with raw and extended semen. Morphologic abnormalities of sperm have the greatest relationship to fertility of livestock [4].Based on the result of a number of studies that have evaluated the reliability of semen analysis testing it would appear that there is a significantlack of standarlization in the performance and reporting of semen analysis among laboratories. A large degree of variation and disagreement exists among different laboratories performing this test and quality control procedures are not routeinly performed[5]. For many years now the World Health Organization (WHO) manuals have served as a primary resource for seminal fluid analysis procedures. It includes information about abnormalities that may occur in the interactions between spermatozoa taken from a male person[6].

Types of Sperm

Despite controversy regarding the clinical value of semen analysis, male fertility investigation still relies on a standardized analysis of the semen parameters. This is especially true for infertility clinics in both developing and developed countries. The current review addresses important changes in the analysis of semen as described in the new World Health Organization (WHO) manual for semen analysis [7]. A variety of tests are available to evaluate different aspects of these functions. To accurately use these functional assays, the clinician must understand what the tests measure, what the indications are for the assays, and how to interpret the results to direct further testing or patient management[8]. Some example to explain the types of sperm are:-

a) Oligozoospermia

b) Asthenozoospermia

c) Teratozoospermia

d) Normozoospermia

e) Aspermia

Oligozoospermia

Oligozoospermia is also known as Oligospermia. When the sperm count is low so it will come in Oligospermia. According to the medical definition when the sperm count is fewer than 15 million/ml, so here is Oligozoospermia. When the sperm count is more than 15 million/ml, so there is no Oligozoospermia. Some diseases like genetic condition, infection, any blockage are the cause of Oligozoospermia.Toxins is also the cause of oligozoospermia. Environmental heavy metals are present in toxins. Heat and chemical dtrug are also the cause of low sperm count.

Asthenozoospermia

Asthenozoospermia is also known as asthenospermia. When there is low motility in sperm so there isasthenospermia condition. Motility means, it is the ability of the sperm to move forward. When the motility of the sperm is good so it can easily swim it uterus and develop the layer of the egg's to fertilise the ovum.

Teratozoospermia

Teratozoospermia is also known as Teartospermia.Teratozoospermia is based on the morphology or shaped of the sperm. When the abnormal morphology is more in sperm, so it indicates the teratospermia. It is impact due to the lifestyle and habits like smoking, tobacco or other toxins components of a male. It effects the male fertility power.

Normozoospermia

Normozoospermia is also known as the normospermia. When sperm count, motility power and morphology all are good in semen so it is the condition of the normozoospermia. Normozoospermia means normal sperm.

Aspermia

When there is no sperm in semen so it shows the aspermia condition. Aspermia is also known as Azoospermia.

METHOD

For Semen Monitor, We have to face the 6 phase:-

a) Parameter

b) Normal Parameter

c) Microscopic Parameter

d) Motility

e) Sperm Morphology

f) Comment

Parameter

Firstly we are going to collect sperm through ejaculate. In this duration we have to note the Temperance Period & Collection Time of the sperm. Collection time is necessary because after passes sometime in the ejaculate most sperm are dead in semen. Collection time & Temperance period are present in parameter.

Normal Parameter

After that we have to measure the volume of the sperm in ml like 3.0ml, 1.0ml. But volume is present in normal parameter.

Microscopic Parameter

In microscopic parameter, Sperm count & Total sperm count are present because firstly we have to calculate the sperm. The unit of sperm count is million/ml and the unit of total sperm count is million/ejaculate. Sperm count should be >=15 million/ml and total sperm count should be >=39 million/ejaculate. Formula to calculate the total sperm count is multiply of volume and sperm count.

Total Sperm Count= Volume* Sperm Count[million/ml]

Motility Parameter

Motility is count in 100%. In motility, Progressive sperm [PR] and Non- Progressive[PR] sperm will come. The standard calculation of Motility is PR>=32% or PR+NP>40% i.e. progressive sperm should be >=32% or the sum of the progressive and non-progressive sperm should be >=40%. Both progressive and non-progressive sperm should be present this calculation. After the progressive and non-progressive sperm Immotile sperm were come. Immotile sperm is dead sperm. If in the semen dead sperm are present so it will go in the immotile sperm. Immotile are denoted by IM.

SPERM MORPHOLOGY

Sperm Morphology is also known as shape of sperm . In Sperm Morphology, Normal sperm &Abnormal sperm will come. Normal sperm should be >=4% and left are abnormal sperm.

Comment

In this section, the name of spermia or sperm are come like Oligozoospermia, Asthenzoospermia etc.

RESULT

After collecting the semen and note it's temperance period and collection time. We have to measure the volume of the semen.

Now we start calculate the sperm count. If the sperm count is more than 15 million/ml and total sperm count is more than 39 million/ejaculate then there is no Oligoozoospermia. If the sperm count is less than 15 million/ml so the total sperm count is also less than 39 million/ejaculate then there is Oligoozoospermia.

If there is no sperm in semen, so the condition is of Aspermia.

After the Microscopic parameter, we have to focus in Motility section. If the PR sperm is more than 32% or PR+NP sperm is more than 40% left are immotile sperm so there is no Asthenozoospermia. If the PR sperm is less than 32% or PR+NP sperm is less than 40% left are immotile sperm so there is Asthenozoospermia.

Now the Sperm Morphology section will start. When the normal sperm is more than 4% and left are abnormal sperm then is no Teratozoospermia. When the normal sperm is less than 4% and left are abnormal sperm then is Teratozoospermia.

When sperm count is more than 15 million/ml and total sperm count is more than 39 million/ejaculate and PR sperm is more than 32% or PR+NP sperm is more than 40% and the normal sperm is more than 4% so the condition is of Normozoospermia.

The spremia name will be show in the comment section.

CONCLUSION

Semen monitor is based on very simple methodology but it is necessary to calculate the semen of the male. Nowadays infertility cases are increases, sometimes it is happen due to the female fertility or sometimes it happen due to the male fertility. Fertility cases are increase because people does not keep take care of their food, environment and health. All the standard calculations are taken from World Health Organizations parameters. This software is only for Andrologist to

calculate the semen of the male. In the test centre, Andrologist can show their achivements to their patients because this software records its previous data. In future, if andrologist wants to use this software so they can put their hospital or centre logo in it even they get a better print report of their semen monitor.

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