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MATRIC NO;18/MHSO2/185

DEPT;NURSING ,200level

COURSECODE;PHS 212

5; Male infertility

Male infertility refers to a males inability to cause pregnancy in a fertile female.In humans it accounts for 40~50% of infertility. It affects 7% of all men. Male infertility is commonly due to deficiencies in the semen, and the semen quality is used as a surrogate measure of male fecundity. Causes of male infertility 1; Abnormal sperm production or function; Due to undescended testicles ,genetic defects , health problems such as diabetes , or infections such as chlamydia ,gonorrhea,lumps or HIV.Enlarged veins in the testes also can affect the quality of sperm.

2;Immune infertility; Antisperm antibodies have been considered as infertility cause in around 10~30% of infertile couples .ASA production are directed against surface antigens on sperm, which can interfere with sperm motility and transport through female reproductive tract ,inhibiting capacitation and acrosome reaction,impaired fertilization,influence on the implantation process , and impaired growth and development of the embryo.

3;Genetics; Chromosomal anomalies and genetic mutations account for nearly 10~15% of all male infertility cases.

4;Klinefelter syndrome; One of the most commonly known causes of infertility is klinefelter syndrome, affecting 1 out of 500~1000 newborn males.Klinefelter syndrome is a chromosomal defect that occurs during gamete formation due to a nondisjunction error during cell division .Resulting in males having smaller testes ,reducing the amount of testosterone and sperm production.

5;Y chromosome deletions; Y chromosomal infertility is a direct cause of male infertility due to its effect on sperm production, occurring in 1 out of every 2000 males. usually affected male show no sign of symptoms other than at times can exhibit smaller teste size .

Others are ;,Age,centriole,neoplasm,idiopathic failure.

HOW TO AVOID OR PREVENT MALE INFERTILITY

Some strategies suggested or proposed for avoiding male infertility includes

1;Avoid smoking as it damages sperm DNA

2;Avoid heavy marijuana and alcohol use

3;Avoid excessive heat to testes

4;Maintain optimal frequency of coital activity; sperm counts can be depressed by daily coital activities and sperm motility maybe depressed by coital activity that takes place too infrequently (abstinence 10~14 days or more).

5;Diet- healthy diet (ie the Mediterranean diet) rich in such nutrients as omega 3 fatty acids,some anti oxidants and vitamins , and low in saturated fatty acids and trans fatty acids are inversely associated with low semen quality parameters.

TREATMENT

Treatments vary according to the underlying disease and the degree of the impairment of the males fertility.Further in an infertility situation , the fertility of the female needs to be considered

Pretesticular conditions can often be addressed by medical means or intervention .

Testicular based male infertiolity tends to be resistant6 to medications ,usual approaches includes using the sperm for intrauterine insemination IUI, invitro fertilization IVF ,or IVF with intracytoplasmic sperm injection.

Obstructive causes of post testicular infertility can be overcome either with surgery or IVF~ICSI.

Vitamin E helps counter oxidative stress, which is Associated with sperm DNA damage and reduced sperm motility.

3;SEMEN

Semen is a greyish white body fluid that is secreted by the gonads of male animals.it carries sperm or the spermatozoa and fructose and other enzymes that helps the sperm to survive to facilitate successful fertilization .The whitish opalescence is due to the large amount of protein that is contains and slightly turbid appearance is due to the spermatozoa contained within it.

PROCESS OF EJACULATION

Semen is released during the process of ejaculation and is processed in the seminal vesicle in the pelvis ,which is where it is produced.

HOW DOES EJACULATION OCCUR

Ejaculation is controlled by the central nervous system and occurs when there is friction on the genitalia and other forms of sexual stimulation.The stimuli lead to impulses that are sent to the brain .

SEMEN COMPOSITION

The semen travels through the ejaculatory ducts and mixes with the fluids from the seminal vesicles,the prostrate, and the bulbourethral glands.The semen vesicles produce a viscous ,fructose rich fluid forming around 65~70% of the semen base.The white colour of the semen is due to secretion from the prostate glands containing enzymes, citric acids,lipids,and acid phosphatase.This forms around 25~30% of the semen base.

At ejaculation around 200~500 million sperms are released by the testes. This forms about 2~5% of the semen composition.Apart from these the bulbourethral glands produce a clear secretion .This helps in mobility of the sperm cells in the vagina and cervix .The gands secretion contributes than 1% to the overall semen composition .

The semen comprises of: fructose, ascorbic acid, zinc, cholesterol, protein , calcium, chlorine ,blood group antigens ,citric acid , DNA ,magnesium , vitamin B12 ,phosphorus, sodium , potassium, uric acid, lactic acid, nitrogen and other nutrients.

SEMEN PER EJACULATION

Ejaculation is a complex process and the compositions of the final semen come together in the posterior urethra and only become mixed after ejaculation is complete.

The volume of semen released per ejaculation is varies .Approximately an average around 3.4 milliliters is ejaculated at one time. It can be as high as 4.99 milliliters or as low as 2.3 milliliters .if there is a prolonged gap between ejaculations , the number of sperm in the semen increases but there is no overall increase in the semen.