

# MALE INFERTILITY: A DETAILED OUTLOOK

Infertility and problems of impaired fecundity have been a concern through ages and is also a significant clinical problem today, which affects 8–12% of couples worldwide.

Popular myth is that women are responsible in majority of the cases, which is fallacious. The fact is, 40% of infertility cases are attributed to the male factor, another 40% to female factors and 20% are due to combined male and female factors.

Semen analysis is the easiest informative test available to know the fertility status of a man, yet most men are hesitant to get it done.

According to WHO, a fertile semen sample must have a sperm count of >15-60 million/ml, active sperm motility of >50% and structurally normal sperms of >4%. If the counts are low or if motility is poor or if abnormal sperms are more then couples may have difficulty in conception. Other tests like hormonal profile, scrotal ultrasound and genetic analysis may be advised based on history, physical examination and semen analysis report.

The problems could be due to factors affecting either sperm production or sperm transport. 50-60% of infertile men have problems in sperm production from testes which may be due to genetic factors or testicular damage from various reasons. 20% are due to infections like mumps and sexually transmitted diseases

which cause obstruction to the tube carrying sperms to the ejaculate. Hormonal disorders, erectile dysfunction, ejaculatory problems, testicular cancer, varicocele, surgery for hernia, undescended testis are some of the other factors. Also today the declining sperm quality is attributed to sedentary lifestyle, night shifts, stress, obesity, use of laptops, smoking and alcohol intake.

In semen analysis we look only for sperm count, motility and shape of sperms.

However, the main drawback of semen analysis is that, it cannot assess the fertilizing capacity and amount of DNA damage within the sperms. DNA Fragmentation Index (DFI) is such test which tells the amount of DNA damage present in semen which helps in taking special precautions in the management.

Sperms with higher DNA damage have been associated with prolonged time to conception and early miscarriages. We can use advanced technology called MACS (magnetic activated cell sorting) in men with high DFI, where in the damaged sperms are separated from the normal ones which are then used for IUI/ICSI, thus enhancing the pregnancy success rates. By removing such damaged sperms the risk of early miscarriage is also reduced. Also, preimplantation

genetic screening (PGS) may be offered to such couples.

## **Treatment:**

There are many treatment options to father a child in men with altered fertility

### **1) Lifestyle Modification:**

avoiding heavy smoking and drinking, regular exercise, eating healthy food etc may to a certain extent improve the quality of semen.

### **2) Medical Management:**

Hormone therapy is used where indicated. Antioxidants have potential benefits on improving sperm count and quality.

### **3)IUI(Artificial Insemination):**

can be done when the count is around 10-12 million at least. Here semen is washed in the lab and active motile sperms are segregated which are placed in female's womb through a soft catheter at the time of ovulation. This is a simple and least expensive procedure.

**4) TESA/PESA:** done when sperms are absent in ejaculate due to obstruction in its transport. Sperms can be removed directly from the testes/ epididymis through a tiny needle. Sperms this obtained are used for ICSI.



**Dr Vandana Hegde**

MBBS, MS-OBG, Fellowship in Reproductive Medicine

**HEGDE HOSPITAL  
HYDERABAD**

**Ph: 83747 33266**