

Azoospermia

Absence of sperms in the semen

It is not very uncommon these days and its incidence is increasing in the Asian population and worldwide.

Before the advent of assisted reproductive techniques these patients had little chance of fathering a child

It can be obstructive or Non obstructive

The causes are mostly genetic, most of which haven't yet been clearly defined although a few genetic tests can be done to find out the cause and the chances of sperm retrieval during microdissection TESE

One of the common genetic causes is klinefelters syndrome wherein there is a extra y chromosome in the male, causing defective sperm production and small size testis

Evaluation :

Physical examination :

The testis size may vary in size, but smaller size testis with azoospermia may indicate lesser chances of sperm production in the testis and hence possibility of failure when trying to extract sperms

Blood evaluation : FSH, LH, Testosterone

if normal may suggest obstructive azoospermia, if abnormal can suggest Non obstructive absence or testicular failure

Testicular failure : suggests inability of the testis to produce sperm despite adequate stimulation from the brain (pituitary gland)

Treatment:

Conception can be achieved by using IVF- ICSI

ICSI involves fusion of one sperm and an ovum each individually to create an embryo, growing it in culture media (petri dish) in controlled environment and then implanting it into the womb of the female partner

In azoospermia, the sperm for this purpose has to be either extracted through TESE or microdissection TESE. This sperm is then used for ICSI.

Microdissection TESE is a specialised procedure requiring operative expertise, with microsurgical training to be able to distinguish the good tubules under 20- 25X magnification. When done under lesser magnification the results will not be as good as the tubules cannot be differentiated.

Complications of MicroTESE

Pain for a few days, which subsides with time

Patients with borderline low testosterone levels may have decrease in testosterone levels for a few weeks which will recover spontaneously with time.

A small testicular incision is generally not visible to naked eye.

MicroTESE when done well is the last resort for extracting male gamete(sperm) in azoospermic patients and the chances for retrieval range from 20 – 50% depending on the individual case (as per clinician expertise and experience).