

Male Fertility following Spinal Cord Injury (SCI)

Background

Sexual function and fertility are as important to these men as regaining control of bladder and bowels, and more important than walking (1). Without medical intervention most will not be able to ejaculate antegradely by masturbation or sexual stimulation.

Methods for Achieving Ejaculation

There are three main methods available for achieving ejaculation in SCI men. These are Penile Vibratory Stimulation (PVS), Direct retrieval and Electro-ejaculation (EEJ).

Penile Vibratory Stimulation (PVS).

Ejaculation may be achieved using a high amplitude hand held vibrator (Ferticare® or Viberect®) which is placed on the glans of the penis. This only works if the patient has an intact reflex arc, ie Upper Motor Neurone injury (2). Repeated ejaculation is known to improve semen quality (3). The ideal situation for the couple to perform home insemination is with intra-vaginal insemination. This is the simplest, most private and least invasive method.

Trial with vibrator. SCI centres may offer up to 3 attempts to achieve antegrade ejaculation. Post vibration urine can be sent for inspection to ascertain if there is retrograde ejaculation.

Obtaining a vibrator: If antegrade ejaculation can be achieved the patient is encouraged to purchase his own for use at home.

Application to the CCG. This may be necessary for funding, although not always successful.

Sperm Retrieval

If PVS fails, the patient can trial EEJ if available (see below) or be referred to his local Andrology Consultant for surgical sperm retrieval via Percutaneous epididymal sperm aspiration (PESA), Testicular Sperm Aspiration (TESA) or Microsurgical Sperm Aspiration (MESA). The former two methods involve aspiration of sperm through the testis under local anaesthetic. The latter is an open procedure, carried out under general anaesthetic. Unless that centre is able to perform simultaneous female insemination the sperm would be frozen and used for IVF.

Electro-ejaculation (EEJ)

The Seagar Model 14 Electro-ejaculator will occasionally cause ejaculation by direct electrical stimulation of the hypogastric plexus via a rectal probe, the reflex arc does not need to be intact. However, it is rarely available, and SCI men with incomplete injuries would need anaesthetic beforehand.

References

1. Anderson KD, (2004) Targeting Recovery: Priorities of the Spinal Cord Injured Population
J. Neurotrauma 21:1371-1383
2. Sonksen J, Ohl DA, (2002) Penile Vibratory Stimulation and electro-ejaculation in the Treatment of Ejaculatory Dysfunction International Journal of Andrology 25:324-332
3. Hamid R, Patki P, Bywater H, Shah PJ, Craggs MD (2006) Effects of repeated ejaculations on semen characteristics following spinal cord injury. Spinal Cord 44(6): 369-73.
4. Shah R (2011) Surgical sperm retrieval: Techniques and their indications.
Indian Journal of Urology. 27:107-109