



GYNAECOLOGY AND FERTILITY CENTRE

INFORMATION SHEET

Surgical sperm retrieval

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Surgical sperm retrieval (SSR)

In some cases, where there is a low sperm count, no sperm in the ejaculate (azoospermia) or the tubes within the testicles are blocked, damaged, or absent, SSR can be carried out. There are two methods for this and both are carried out under a light general anaesthetic, with an additional local anaesthetic to reduce pain after surgery:

- PESA (percutaneous epididymal sperm aspiration) – when sperm are collected from the epididymis (where they are stored after they have been made in the testes), using a fine needle
- TESE (testicular sperm extraction) – when a biopsy is taken from the testicular tissue in order to remove some sperm. This involves making a small cut in the scrotum

What causes azoospermia?

Although most cases of male infertility remain unexplained, there are two reasons why you may be affected by azoospermia (no sperm in the ejaculate).

- Obstructive azoospermia: this means that there is an obstruction in the tubes transporting the sperm from the testes to the outside. This might be because you have had a vasectomy or damage to the vas deferens (the tubes that carries the sperm) during a hernia operation. Sometimes the obstruction can be due to recurrent genital infection. Also, men who are carriers of cystic fibrosis may have congenital absence of the vas deferens (this means they are born without the vas deferens). If the testes are producing sperm it is usually possible to have an SSR procedure
- Non-obstructive azoospermia: usually, the underlying reason for this is that the testes are not producing sperm (testicular failure). However, many men with non-obstructive azoospermia do have small areas of normal sperm production within the testes. Up to 50% of men with supposed untreatable infertility may produce small numbers of normal sperm. In some cases it is possible to find the sperm and recover them via an SSR procedure

What tests do you offer?

In some cases there is an inherited (genetic) reason for azoospermia or a low sperm count which may be identified by screening for possible genetic disorders. The tests we advise are:

- Karyotype (chromosome) test: a blood test to check chromosome abnormalities which are found in 5-10% of men with azoospermia or very low sperm counts
- Cystic fibrosis test: this is the most common genetic condition affecting Caucasians. It is believed that about 70% of men with azoospermia due to congenital absence of the vas deferens are carriers for cystic fibrosis. Therefore, we advise men with no sperm in the ejaculate to be screened for this condition
- Y-chromosome deletion: a blood test to check the Y chromosome for certain genetic abnormalities
- Hormone profile: a blood test to check the level of hormones (FSH, LH, testosterone and prolactin); this can indicate whether or not the testes are producing sperm

What does SSR involve?

- Percutaneous epididymal sperm aspiration (PESA) is a short procedure that involves the doctor passing a very small fine bore needle through the scrotal skin directly into the epididymis. The sperm are collected in a small syringe and the fluid is then viewed under the microscope by the embryologist. Your doctor will be informed immediately if any sperm are identified. This procedure is usually performed under a local anaesthetic but some men may want or need to have light sedation
- Testicular sperm aspiration (TESA): if no sperm are retrieved from PESA, samples of tissue can be removed from the testes via TESA

Both PESA and TESA retrieve small amounts of sperm that will only be suitable for treatment with intra-cytoplasmic sperm injection (ICSI). You can find out more about ICSI in the separate patient leaflet.

What happens if PESA or TESA do not work?

If PESA or TESA do not result in any sperm being found, it may be possible to retrieve sperm through open testicular biopsy. This involves making a small cut in the skin of the scrotum to take a biopsy of the testicular tissue before closing the skin again. However, the final decision to carry out an open biopsy or not depends on your overall clinical assessment and the results of laboratory tests.

How is the treatment carried out?

The Agora Clinic has a purpose built treatment room designed primarily for fertility procedures requiring embryology services such as egg collection, embryo transfer and SSR.

SSR is a day case procedure. During this time you will be cared for by our team of qualified staff who are experienced in all aspects of fertility, day surgery and recovery. We aim to ensure that your procedure is carried out in a caring, professional and efficient manner, making your recovery as comfortable and relaxing as possible.

Before your procedure

- Please arrive at the Agora Clinic by 8.00am on the day your procedure is scheduled. This allows enough time to go through the admissions procedure, talk with your doctor (and if appropriate the anaesthetist), and for us to answer any questions you may have regarding your care
- Do not have anything to eat on the morning of admission. You are, however, encouraged to drink plain water only up to two hours prior to the procedure
- You will be asked to complete a Health Questionnaire which will be discussed with you by one of the fertility nurses
- During your pre-operative assessment a nurse will measure your height, weight, blood pressure, pulse and discuss your general health
- If you are having sedation, this can make you drowsy and affect your coordination for the following 24-48 hour period so it is very important to arrange for an adult to accompany you home after the procedure and to stay with you overnight
- We do not recommend that you travel home by public transport, so please arrange for a private car or taxi to take you home
- Please leave any unnecessary valuables or jewellery at home as the Agora cannot be held responsible for any loss or damage to your property
- Please do not wear any aftershave
- Please bring this leaflet with you when you come for your procedure as it may be useful to refer to.

After your procedure

- You should expect to stay at the Agora Clinic for about an hour to make sure you are fully recovered. Patients having sedation will need to stay longer
- You will be offered something to eat and drink before you leave
- Do not drive, or operate machinery (including domestic appliances) for 48 hours if you were given sedation
- Do not make important decisions or sign any contracts for 24 hours if you were given sedation, as your judgement may be impaired
- You may experience some slight discomfort afterwards. Please make sure you have some over-the-counter painkillers at home
- You are encouraged to wear supportive underwear for the next 48 hours to reduce inflammation and discomfort
- The puncture wounds should be kept clean and dry for 24 hours following the procedure after which time you may have a shower or bath
- If the puncture wounds become red, inflamed or painful, contact your consultant at the Agora or GP
- If you are worried or have any concerns following your procedure you should telephone us on the contact numbers below

Contact numbers

The Agora Clinic: 01273 229410 between the hours of 8.00am-5.00pm Monday to Friday

Outside the above hours, please telephone 07912 341857
which is a mobile phone held by the on-call fertility nurse for emergency use only.

The medical information in this leaflet is provided as an educational resource only. It is not intended to replace the advice of your GP or medical team and should not be used or relied upon for any diagnostic or treatment purposes. The information has been prepared by Dr Carole Gilling-Smith, Consultant Gynaecologist and Medical Director of the Agora Gynaecology and Fertility Centre. It was last updated in August 2014.