Surgical Recovery of Sperm for Intracytoplasmic Sperm Injection – Patient Information Leaflet

1 BACKGROUND

Some men have no sperm in the fluid they ejaculate; a condition called *azoospermia*. This may be due to a mechanical blockage in the tubes draining the testes but where normal sperm numbers are still being created. Alternatively, the tubes may work normally but very few or no sperm are actually produced in the testicle. Usually such men have little or no chance of fathering a pregnancy. However, in some of these cases, one of two small operations may obtain enough sperm for an egg, and in turn an embryo & pregnancy, to be created using a form of IVF called intracytoplasmic sperm injection (ICSI - see separate information sheet).

2 PESA

In cases of mechanical blockage, i.e. after vasectomy or when there is a congenital absence of the vas (the tube leading from the epididymis), then it would be reasonable to expect to recover sperm from the epididymis. This can be done under a light anaesthetic (sedation & local anaesthetic) using a fine needle, similar to the one used to take blood, to aspirate the epididymal fluid. This procedure is known as percutaneous epididymal sperm aspiration (PESA). Samples are assessed immediately in theatre by the embryologist and the procedure is usually completed in a short time, provided sufficient motile sperm are observed. It is possible to do this only under local anaesthetic in exceptional circumstances only

3 TESA

If no sperm are obtained by PESA, then a procedure known as TESA (testicular extraction of sperm by aspiration) is carried out where a similar needle is inserted directly into the testicle and a small piece of testicular tissue withdrawn, which should contain sperm.

In cases where the production of sperm is in doubt, perhaps indicated by raised hormone levels (FSH), it is unlikely that sperm would be recovered by PESA and it would be normal to proceed with TESA from the outset.

4 TESTICULAR BIOPSY

There are a few cases where the TESA sample gives insufficient sperm for ICSI. In these cases, a larger piece of testicular tissue is required and this is achieved by making a small incision in the scrotum to expose the testicle; the required tissue can then be removed. This procedure does involve a few stitches to close the incision.

Following either TESA and/or testicular biopsy, bruising and discomfort should be expected, which will progressively settle over the next few days. This may be minimised by the wearing a scrotal support or tight fitting elasticated underwear. The stitches will usually dissolve after a few days but may occasionally require removal. Problems with the wound are unlikely but if there is any discharge or swelling, then you should contact the Unit (01382 633835) or your own GP to have this checked.

Sperm cannot be recovered in all cases and it is important to discuss with the staff what you would wish to do in such circumstances. If there is considered a high chance of this, then a diagnostic operation may be advisable in the first instance to confirm the production of sperm before proceeding with the full assisted conception treatment for your partner. It is also normal to perform the surgical recovery of sperm on the same day as the egg recovery and it is important to be aware that this will mean neither partner will be able to drive home following their respective procedures. Therefore local accommodation should be considered or a 'chauffeur' arranged. In exceptional circumstances, or when a testicular biopsy is planned in advance, this procedure may be done on the day prior to egg collection.