

ECH Urology Department Revised Vasectomy Guidelines

DATE: 10 April 2008

**RE: UROLOGY DEPARTMENT REVISED GUIDELINES
FOR VASECTOMY**

ENDORSED: 9 APRIL 2008

Revised Recommendations

The environment used for vasectomy should include the provision of heart rate monitoring

Division of the vas on its own is not an acceptable technique because of its failure rate. It should be accompanied by fascial interposition or diathermy.

Vasectomy should be performed under local anaesthetic wherever possible.

Men should be advised to use effective contraception until azoospermia has been confirmed.

- The rationale for post-vasectomy semen analysis is to confirm clearance of stored spermatozoa downstream of the vasectomy site and to confirm, as quickly as possible, men who fail to become sterile through either technical failure or early recanalisation.
- The timing of post-vasectomy semen analysis and the number of specimens required to confirm clearance remain controversial
- By convention, in the UK, two post-vasectomy samples are usually examined before clearance to stop contraception is given, although the timing varies. There is little evidence to support the need for two samples and only one study has compared a regimen with two tests against one with just one test
- The main rationale for testing two samples, however, is to help detect cases of early recanalisation, when the first test shows azoospermia but the second and subsequent tests are positive.
- An azoospermic semen sample serves only to confirm division of both vas deferens and does not guarantee that the patient will not develop subsequent re-canalisation of the vas deferens.
- There is no evidence to suggest that the presence of rare non-motile sperm implies possible vasectomy failure
- Testing should not start until **at least eight weeks after the vasectomy** because the time necessary for complete expulsion of stored sperm may vary, depending in part upon the frequency of ejaculation and on age. All vasectomy patients should be clearly warned of this problem and advised to use other contraceptive measures until azoospermia has been confirmed.
- Men who have operative failure or early recanalisation will need to have the vasectomy repeated. Late recanalisation is not usually discovered until a pregnancy is reported. What is more uncertain is what to do with the small percentage of men who have persisting non-motile sperm in their samples. 'Special clearance' is the term given to the advice to stop contraception despite a very low concentration of non-motile sperm being present and may affect 2.0–2.5% of men undergoing vasectomy.

In a small minority of men, non-motile sperm persist after vasectomy. In such cases, 'special clearance' to stop contraception may be given when less than 10,000 non-motile sperm/ml are found in a fresh specimen examined at least seven months after vasectomy, as no pregnancies have yet been reported under these circumstances.

- No pregnancies were reported for over 600 men followed up for one to three years when contraception was discontinued **after less than 10 000 non-motile sperm/ml had been found in a fresh specimen examined at least seven months after vasectomy.**

New Recommendations for Semen analysis

- Continue with semen analysis at 12 and 16 weeks post procedure
 - if semen tests both clear then patient can be told he is sterile
 - If either / both contain motile sperms in large quantities then procedure has probably failed and should be repeated under GA
 - If either / both contains small number of non motile sperms then repeat semen test at 7 months - this should be a “fertility test” request NOT “vasectomy” request as the former includes microscopy of the semen and analysis of the number of live sperms (if any)
 - IF Less than 10,000 non-motile sperms/ml found on fresh specimen (i.e. less than one hour old) at 7 months then patient can be given “special clearance”
- **BUT Patientd reminded that vasectomy has a failure rate of 1 in 2000 EVEN where normal clearance (azoospermia) has been given**

Recommendations for Patient Information

- **Counsel that vasectomy should be considered an irreversible procedure and that no guarantees can be given that vasectomy reversal may be successful IF the patient should change his mind**
- **Two semen tests will be performed post vasectomy, at 12 and 16 weeks**
 - **The patient MUST use other contraception until sterility is proven and he has been told he is sterile – i.e. if the semen tests are both clear on the wet preparation and centrifuged sample**
 - **If either/both contains motile sperms in large quantities then the vasectomy will need to be repeated under GA**
 - **If either/both sample contains small numbers of non-motile sperms then a further sample will performed at 28 weeks and the patient must continue with contraception until clearance is given**
 - **IF Less than 10,000 non-motile sperms/ml found on fresh specimen (i.e. less than one hour old) at 7 months then patient can be given “special clearance”**
- **BUT Patient still reminded that vasectomy has a failure rate of 1 in 2000 EVEN where normal clearance (azoospermia) has been given**
- **Patient should be warned that 5-10% of patients develop persisting scrotal discomfort after vasectomy**

References / Sources

- The First Semen Analysis after Vasectomy: Timing and definition of success. Bhodiwala et al. BJU International 2006, 727-728
- Letter to editor re above; BJU International 2007, 700
- Determining the success of Vasectomy. Dhar et al. BJU International 2006, 773-776
- Royal College of Obstetricians and Gynaecologists – Male and Female Sterilisation: Evidence-based Clinical Guideline Number 4
- British Andrology Society guidelines for the assessment of post vasectomy semen samples (2002)
- Philp et al (*Brit J Urol.* 1984;56:745–748) → to give men with sperm persistence “special clearance” for unprotected intercourse after vasectomy...criteria were: 1) 2 consecutive sperm counts of less than 10 000/mL; 2) no motile sperm; 3) a minimum of 7 months elapsed time since vasectomy.