Post vasectomy semen analysis report guidance

These notes are to help with interpretation of the post vasectomy semen analysis report and are based on information contained in the World Health Organisation (2010) Laboratory Manual for the Examination and Processing of Human Semen[1] and the ABA/BFS/BAUS 2016 Guidelines for Postvasectomy Semen Analysis[2]

[1]http://www.who.int/reproductivehealth/publications/infertility/9789241547789/en/ [2]*J Clin Pathol* doi:10.1136/jclinpath-2016-203731

If you still have questions about the report please contact the Andrology Service on (0114) 226 8343 and a member of our scientific staff will be happy to speak to you.

Volume

95% of fertile men have a semen volume of >1.5mls. Volume is used to calculate the total number of progressively motile sperm in each ejaculate. Low semen volume is characteristic of obstruction of the ejaculatory duct or congenital bilateral absence of the vas deferens, or may be the result of sample spillage or incomplete ejaculation. High semen volume may reflect active inflammation of the accessory organs.

Viscosity

High viscosity is of unclear clinical significance but may interfere with accurate assessment of sperm concentration and motility.

Concentration

This refers to the number of sperm (in millions) per ml of semen and is correlated with time to pregnancy and to fertilisation and pregnancy rates during assisted conception. 95% of fertile men have a concentration of >15 x 10^6 sperm per ml. It is influenced by the volume of secretions from the accessory glands and therefore is not an independent measure of testicular output.
Sperm concentration should be interpreted alongside semen volume.
The level of measurement uncertainty is high for samples with low sperm concentration.

Motility

95% of fertile men have progressive sperm motility greater than 32%. Sperm motility is influenced by temperature and time since ejaculation.

Repeat testing

If the first sample contains any sperm, either motile or immotile, then a repeat sample is recommended. It is recommended that this sample should be produced on site in the Andrology Department so that acceptance criteria for special clearance can be met, if required.

Acceptance criteria for special clearance

Special clearance can only be given if the following sample collection criteria are met:

- Sample is collected into a screened specimen container only
- ≥12 weeks and 20 ejaculations since vasectomy
- Collection of entire sample by masturbation
- Sexual abstinence period 2-7 days prior to sample collection
- Sample is examined within 1 hour of production

Special clearance

FSRH guidelines recommend special clearance on a single semen sample, collected within the criteria stated above, which contains <100,000 immotile sperm per ml.
ABA/BFS/BAUS guidelines recommend special clearance on 2 such samples.

Uncertainty

Measurement uncertainty exists for all parameters assessed in this semen analysis. Please contact us if you would like more information about the uncertainty of the tests performed.