



Royal College
of Nursing

Performing ultrasound-guided oocyte retrieval

*RCN guidance for
fertility nurses*



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This guidance has been produced by the Royal College of Nursing Fertility Nurses Group

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Introduction

This guidance has been produced by the RCN Fertility Nurses Group and is aimed at fertility nurses who perform ultrasound-guided oocyte retrieval (OCR). OCR is a procedure by which eggs are collected from a woman's ovaries by using an ultrasound-guided needle (also known as egg collection). The procedure is for infertile couples undergoing in vitro fertilisation (IVF).

Technological developments in fertility treatment have developed rapidly over recent years. In the past oocyte retrieval took place in theatre via a laparoscope. The procedure can now take place as a day treatment using ultrasound and sedation. Fertility nursing practice varies according to the type of treatment centre but the nursing role has developed with nurses now performing OCR.

As a fertility nurse you are professionally accountable, regularly reviewing your work and maintaining your competence is paramount. You must ensure that you have the appropriate training and experience to carry out this procedure, that you work within the Human Fertilisation and Embryology Authority (HFEA)

regulations and that you follow Nursing and Midwifery Council (NMC), RCN and NHS trust protocols. This RCN guidance outlines some of the key issues that you need to be aware of – not least the importance of good communication with patients and making sure that their experience before, during and after this procedure is a positive one.

Professional accountability

The Nursing and Midwifery Council's (NMC) Code of Professional Conduct (2002) states that 'as a registered nurse, midwife or health visitor, you are personally accountable for your practice'. In particular you must, 'maintain and improve your professional knowledge and competence' and 'acknowledge any limitations in your knowledge and competence and decline any duties or responsibilities unless able to perform them in a safe and skilled manner'.

Under no circumstances should you undertake a procedure unless you are competent to do so. It is your responsibility to inform your manager if you haven't had appropriate training.

The nursing team should ensure that it is meeting current legislation, policies and protocols set out by the NMC, HFEA, RCN and NHS trust board. Practitioners within the NHS and the independent sector should comply with the policies set by the fertility unit's management. The individual nurse should ensure that they have indemnity insurance from a professional organisation such as the RCN, and that their employer gives vicarious liability to its employees.

Requirements of the role

In order to perform ultrasound-guided oocyte retrieval you must:

- ❖ be working in Band 6-7 or G grade equivalent (recommended)
- ❖ have two years of experience working in an assisted conception unit
- ❖ have achieved competent practice in all aspects of assisted reproductive techniques
- ❖ have achieved a competent level in ultrasound scanning (with appropriate training records and maintenance of clinical skill, for example, 15 to 20 per week)
- ❖ have assisted with five to ten oocyte retrievals per week
- ❖ be able to demonstrate knowledge of pelvic anatomy and physiology and pathology of the pelvic structures
- ❖ undertake all trust/unit courses for the maintenance of safe practice including:
 - IV drug administration
 - cannulation
 - cardio-pulmonary resuscitation
- ❖ observe and work within the Human Fertilisation and Embryology Authority (HFEA) regulations
- ❖ be aware of clinical and trust risk management and emergency procedures
- ❖ perform 50 oocyte retrievals supervised by a senior clinician who regularly performs the procedure
- ❖ record all cases for one year for regular assessment by your supervisor
- ❖ always confirm that a competent clinician is available on the unit or near by.

Preparing the patient – your role

Counselling, providing information, and consent

As a fertility nurse you are in a unique position to support patients through, what can be, a very difficult and stressful situation. The Human Fertilisation Authority and Embryology Act 1990 requires that patients seeking treatment for fertility problems are offered counselling on the implications of treatment.

Factual information should be provided to help infertile couples to make their own decisions about how to proceed. Some couples can be desperate for information about their condition and treatment options. Therefore, fertility nurses should be well informed on current research. Many nurses decide to undertake further study in counselling and ethics. Therapeutic counselling should be provided by someone not directly concerned with the procedure.

By law all HFEA licensed clinics must offer implications counselling before a patient consents to treatment. Prior to treatment all patients should have a full consultation with the designated

doctor or nurse and have completed all the unit and HFEA consent forms and recommended screening.

Currently there are three types of consent involved in HFEA licensed treatment:

- ❖ consent to use and storage of eggs, sperm and/or embryos
- ❖ consent to treatment
- ❖ consent to disclosure of information.

Consent must also be ‘informed’. This means that you must provide couples with suitable opportunity to receive proper counselling about the implications of storage or any treatment that they are consenting to. You must also provide information about the processes and procedures involved. Couples should have time to reflect on this information before signing the consent forms.

Suitability for procedure

You should take a full medical history and baseline ultrasound scan to determine if they are appropriate for nurse performed oocyte retrieval. Decisions about allocation of OCR to the nurse or the clinician may need to be deferred until the HCG (human

chorionic gonadotrophin) decision-making scan. This is when the follicular tracking scan identifies that at least three follicles have reached 18mm in size. HCG is then administered that night (which will be 35 hours before the OCR). Factors you need to take into consideration include:

- ◆ position of ovaries in the pelvis
- ◆ history of previous uncomplicated procedures
- ◆ no other complicating factors such as endometriomas, hydrosalpinges, ovarian cysts, history of clotting disorders or previous pelvic inflammatory diseases (PID).

Follow training protocols

Each unit should have protocols produced by the team for all procedures performed by practitioners. The protocol should cover: the location; equipment required; description of the procedure that each practitioner should adhere to, and should always be regularly updated. All practitioners should perform trial procedures prior to commencing treatment and maintain records of their practice. Supervision

should be mandatory until the individual has been assessed as competent by a senior nurse or clinician. You must audit your practice on a monthly basis and should always keep accurate records.

The procedure

For all procedures HFEA guidelines on patient witnessing should be adhered to. The patient should arrive on the unit thirty minutes prior to the procedure. You should ensure that the patient has no known allergies and has been nil by mouth for six hours. Ask the patient to empty her bladder and prepare her for the procedure. Check the identity of the patient prior to administering the sedation. The prescribed sedation should be checked by two practitioners and the drug book should be appropriately signed and dated. Check all emergency equipment on a daily basis and that both the oxygen and suction cylinders are in suitable working order. Reversal agents should be available in the retrieval room.

The nurse or doctor inserts an appropriately sized venflon (one that can accommodate resuscitation drugs, no less than a 21 gauge) into a vein in

the dorsal aspect of the patient's left or right hand. Prescribed sedation and analgesia in increments of a quarter dosage are given at a gradual rate.

Attach a pulse oximeter to the patient's finger to monitor oxygen saturation and pulse rate. It is essential to obtain a baseline reading. Prescribed prophylactic antibiotics and anti-emetics can be given to patients if required, and if prescribed in the notes by a doctor or by a nurse (if they have completed the nurse prescribing course).

The equipment required for the procedure should be listed in your unit's protocol for oocyte retrieval. Place a durable condom onto the vaginal probe and perform a baseline scan. Attach a sterilised needle guide to the probe, apply lubrication to the tip and then carefully insert into the vagina. The ovary should be lined up to the most accessible position on the screen, take a photograph and measure the follicles. Insert the appropriate needle as identified by the unit protocol into the biopsy guide. It is essential that you avoid contaminating the needle tip at this point. Line the most accessible follicle up against the biopsy lines, push the probe against the ovary and carefully

insert the needle into the follicle. Warn the patient to expect a sharp pain/pressure at that point and advise they remain still.

Once the needle tip is identified in the follicle the assistant nurse or health care assistant applies suction to the syringe to aspirate the follicular fluid. The flushing of the follicles is then performed either manually or by suction pump. All follicular fluid and flushing media is placed in heated blocks and the scientists record the size of the follicle.

Advance the needle into an adjacent follicle or withdraw to the edge of the ovary, realign and advance into an adjacent follicle. The probe should not be moved with the needle in the advanced position. The tip of the needle should be seen on the screen at all times; it should never be advanced if the tip is not visible. All follicles should be aspirated – follicles should only be left if they are difficult to reach or particularly uncomfortable for the patient.

Safe, competent practice should ensure that the large pelvic blood vessels and the bowel are not perforated. The needle should be flushed between the two ovaries of any

potential blockage caused by blood clots. The second ovary should be dealt with in the same way.

At the end of the procedure the probe is removed. If there has been a significant blood loss during the procedure, or there is a steady loss vaginally at the end of the procedure, a speculum should be inserted and the bleeding point identified and assessed with a clinician. Apply pressure to the bleeding point with a gauze swab held in the end of sponge-holding forceps. The clinician may be required to insert a vaginal pack.

When to alert a doctor

The doctor should be summoned if:

- ❖ the patient responds adversely to the test dose of IV drugs
- ❖ the ovaries, an ovary or a significant part of an ovary is unexpectedly inaccessible
- ❖ the patient experiences an unusual amount of pain
- ❖ there is an excessive amount of bleeding during or after the procedure
- ❖ the patient's vital signs deteriorate leading to bradycardia, faintness

and nausea

- ❖ bowel activity is occluding pelvic structures.

After the procedure

Escort the patient to the recovery room where she should rest until she has recovered fully. The patient should be able to move comfortably, to have eaten, had a drink and passed urine with no further blood loss before being discharged home.

Further reading

Birch H (2001) The extended role of the nurse: opportunity or threat. *Human Fertility* Vol 4 No 3 p 138-144

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National Institute for Clinical Excellence (2004) *Fertility assessment and treatment for people with fertility problems*. London: NICE. Available at www.nice.org.uk/CG011 accessed 12 July 2004

NMC (2002) Code of Professional Conduct. London: NMC

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Royal College of Nursing (2004) *Performing intra-uterine insemination and embryo transfer. RCN guidance for fertility nurses*. London: RCN. Publication code 002 424

Useful addresses

National Institute for Clinical Excellence

The National Institute for Clinical Excellence (NICE) is part of the NHS. It is the independent organisation responsible for providing national guidance on treatments and care for people using the NHS in England and Wales. Their guidance is intended for health care professionals, patients and their carers to help them make decisions about treatment and health care.

MidCity Place
71 High Holborn
London WC1V 6NA

Telephone: 020 7067 5800

Fax: 020 7067 5801

Email: nice@nice.nhs.uk

Website: www.nice.org.uk

The Human Fertilisation and Embryology Association

The HFEA is a non-departmental Government body that regulates and inspects all UK clinics providing IVF, donor insemination or the storage of eggs, sperm or embryos. The website contains HFEA guidance, plus has a search facility to find your local clinic, and has information for both patients and donors.

Human Fertilisation and Embryology Authority

21 Bloomsbury Street
London WC1B 3HF

Telephone: 020 7291 8200
Fax: 020 7291 8201
Email: admin@hfea.gov.uk
Website: www.hfea.gov.uk

Glossary of terms used in fertility treatment

Artificial insemination with husband sperm (AIH)

Prepared sperm are placed at the entrance of the cervix at the time of ovulation.

Artificial insemination with donor sperm (AID)

Similar to AIH but using donated sperm.

Gamete intra fallopian transfer (GIFT)

Similar to IVF but harvested eggs are placed in the tube with prepared sperm where fertilisation should occur.

Implications counselling

A counsellor can talk to a patient about the treatment so that they understand exactly what it involves and how it might affect them and those close to them. This is important if the patient is considering treatment with donated sperm, eggs or embryos, or surrogacy arrangements – all of which involve complicated issues, not least the legal implications.

Intra-uterine insemination (IUI)

Drug stimulation is used to promote follicular growth of one to two follicles. Prepared sperm are then transferred into the uterus following the induction of ovulation.

In vitro fertilisation (IVF)

Literally means fertilisation 'in glass'. Eggs are removed from the ovaries and fertilised with sperm in a laboratory dish before being placed into the woman's body.

Intracytoplasmic sperm injection (ICSI)

This involves injecting a single sperm into the harvested egg. This is a treatment for male infertility that is frequently used by cancer patients.

Ovulation Induction (OI)

This is a drug treatment to establish ovulation in women who do not ovulate regularly. Women must be carefully monitored during a treatment cycle to avoid the risk of multiple pregnancy.

Surgical sperm retrieval (SSR)

Sperm are retrieved from testicular tissue and then used to fertilise an egg with ICSI.



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020 7409 3333

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www.rcn.org.uk/direct
0845 772 6100

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