Manual Vacuum Aspiration (MVA)

Introduction

This document should be read and used where necessary, in conjunction with SA_03 Management Algorithm: Surgical Abortion < 7 Weeks Gestation.

This guideline applies to:

- Termination of pregnancies to 12+0 weeks gestation
- Management of retained products of conception, failed medical or surgical abortion, and haematometra

Gestational age limits for MVA

**Lower**

With the use of a judicious protocol that includes tissue inspection, $\beta$-hCG measurement, and prompt referral for evaluation of possible ectopic pregnancy, MVA can be offered as soon as a pregnancy test is positive (1). Because measurement of $\beta$-hCG cannot currently be undertaken at bpas, the practical lower gestational age limit for MVA at bpas is when a gestational sac can be seen on ultrasound (typically 4-5 weeks gestation on a transvaginal scan).

Before a yolk sac or fetal pole can be identified within a gestational sac on ultrasound, it is difficult to definitively diagnose an intrauterine pregnancy and exclude early embryonic demise or ectopic pregnancy (2, 3). It is bpas policy that MVA can be performed when only a gestational sac is seen in an asymptomatic client; however the procedure must conform to the management algorithm for Surgical Abortion < 7 Weeks Gestation.

If a client displays any symptoms suggestive of an ectopic pregnancy (e.g., abdominal pain, vaginal bleeding) and an intrauterine pregnancy cannot be confirmed she must be referred for immediate evaluation. If a gestational sac cannot be visualised and she is less than 5 weeks gestation with a confident date of her last menstrual period and she is asymptomatic, a discussion can occur regarding the relative risks and benefits of her options which include referral for evaluation by an Early Pregnancy Assessment Unit or delaying the procedure until a sac can be seen on ultrasound.

**Upper**

12+0 weeks gestation

**Other uses for MVA**

Manual vacuum aspiration is an excellent choice for the management of a failed medical or surgical abortion, retained products of conception, and haematometra (4). If facilities and staff are available and the client is amenable to a procedure under local anaesthesia, MVA can be a quick and easy way to address the client’s needs.
promptly. The procedure does not differ for clients who are having MVA for these indications, however cervical dilation may not be necessary and examination of the aspirated tissue will differ from that at the time of a termination.

**Contraindications to MVA**

- In general, contraindications for MVA are no different than those for electric vacuum aspiration
- Gestation exceeding 12+0 weeks
- Allergy to local anaesthetic drugs (unless client declines use of local anaesthesia)

**Cautions with MVA**

- Clients who have excessive anxiety about the procedure or local anaesthetic techniques
- Congenital or acquired uterine or cervical anomalies - these clients may require ultrasound guidance during the procedure and it may be more difficult to dilate the cervix or cannulate the uterus leading to a longer or more painful procedure

**Procedures**

**Counselling, education and informed consent**

1. Provide information leaflet on Manual Vacuum Aspiration Abortion
2. The procedure, risks and alternatives should be explained to the client and all questions answered
3. Pain control during the procedure should be discussed

   - The woman may be advised to take an analgesic 1 hour prior to her appointment at the clinic/unit. Suitable options include
     - Paracetamol 1 G, or
     - Ibuprofen 800 mg, or
     - Cocodamol 8 mg/500 mg (1-2 tablets)

   - Alternatively, oral ibuprofen or paracetamol can be provided at the treatment unit
   - “Gas and Air” (Entonox) will be available to her throughout the procedure
   - Intra- or para-cervical local anaesthetic will be provided unless client has an allergy or declines; this may be an injection and/or lidocaine gel
4. The woman should be advised that a health professional will be at her side during the procedure providing reassurance and support
5. Informed consent should be obtained

**Medical history, physical examination, and laboratory evaluation**

1. It is the Consultation Centre’s responsibility to thoroughly assess and screen clients for treatment
2. Evaluation should include all components relevant to surgical abortion

3. Any client with a complex medical history, where suitability is not clear, should have her case reviewed with a physician
   - Preferably, this is a physician at the Consultation Centre
   - Alternatively, a discussion may occur with a physician at the Treatment Unit
   - However, a full evaluation must be completed before the client goes for treatment so that the client is not turned away. This may include obtaining and assessing letters from GPs or specialist consultants or additional blood tests

4. Pre-procedure blood testing is typically undertaken on the day of the MVA
   - Haemoglobin should be obtained for any client where there is a significant history of anaemia or concern about anaemia based on clinical signs and symptoms
   - Rhesus testing must be performed and, if indicated, Anti-D immunoglobulin provided on the day of treatment

Contraception

1. All clients should have a plan for contraception documented before leaving the Consultation Centre. As much as possible, initiation of these methods should not be delayed as ovulation can occur within 10 days of an abortion

2. Hormonal methods such as oral contraceptive pills, injectables, and the contraceptive patch can be started on the day of the abortion or the next day provided there abortion is deemed to be complete

3. Implants and intrauterine contraceptive devices (5) can be can be placed immediately after an uncomplicated procedure

4. If the client cannot be started on a method immediately, she should be counselled on the use condoms and emergency contraception

5. Vaginal intercourse should be avoided for at least one week following the abortion to reduce the risk of infection

Treatment

1. Client preparation
   - Before the treatment begins, the client should be introduced to the nurse/assistant and doctor, the procedure should be reviewed with her, including the use and benefits of Entonox and any questions she has should be answered
   - The treatment doctor should review the client’s medical history, gestational age dating (i.e., ultrasound), and post-abortion contraceptive plan. Any remaining questions that the client has should be answered before the procedure begins
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- An initial set of observations (pulse and blood pressure) should be taken and recorded in the case notes
- The client should be asked to void shortly before the procedure; urinary bladder catheterisation is not recommended
- The client should be allowed some privacy to remove her underwear, undress from “the waist down” or be provided with a gown, whichever is her preference
- The client should be assisted onto the treatment couch and the legs put into the supports, the hips should be flexed to about 45º and care should be taken in maintaining symmetry of leg positions
- The client should be kept covered until the doctor is ready to proceed
- An Entonox (“Gas and Air”) mask or mouthpiece should be offered to the client and instructions on its use provided

2. Uterine evacuation

- Refer to Management Algorithm: Surgical Abortion < 7 weeks gestation as appropriate
- A bimanual pelvic examination should be performed to assess the uterine size and position
- In cases of known uterine anomaly, large fibroids, or an ante- or retroflexed uterus, the use of continuous ultrasound guidance during the procedure may be helpful
- After introduction of a vaginal speculum, the vagina and cervix should be cleaned with a non spirit-based preparation (e.g., Travisept)
- A tenaculum should be placed on the cervix to stabilize and align the cervical canal and uterine cavity during the procedure. Injection of 1cc 1% lidocaine at the site where the tenaculum will be placed can reduce discomfort from applying the instrument
- Intra- or para-cervical infiltration of 1% lidocaine (10-20cc) is recommended; instillation of intra-cervical lidocaine gel is an option
- The appropriate cannula and aspirator should be chosen
  - MVA cannulae are made of rigid or flexible plastic and come in a range of sizes up to 12 mm in diameter. Typically, the size of the cannula used would match the gestational age in weeks. However, practitioners are often able to successfully and completely evacuate the uterus with cannulae of smaller diameter; this may avoid the need for cervical dilation and may be more comfortable for the client
  - Single and double-valve aspirators are available. Double valve aspirators can accommodate cannulae up to 12 mm; single-valve aspirators can accommodate up to a 6 mm cannula
- If dilatation is necessary, the cervix should be dilated to the minimum necessary to insert a cannula of the appropriate size
- Insert the cannula gently through the cervix into the uterine cavity just past the internal os; rotating the cannula with gentle pressure often helps ease insertion
- Attach the charged 60 ml self-locking syringe to the cannula. Make sure that the cannula does not move forward into the uterus as you attach the
syringe. Alternatively, treatment doctors may attach the syringe to the cannula before inserting the cannula into the cervical os

- Never grasp the syringe by the plunger arms after the syringe has been charged
- Advance the cannula until it gently touches the fundus and then withdraw it slightly
- Open the valve(s) so that the vacuum is applied to the uterine cavity
- Move the cannula gently back and forth from the fundus to the internal cervical os while rotating it to aspirate all sections of the uterus
- Withdrawing the cannula apertures beyond the cervical os will cause the vacuum to be lost. If the cannula becomes clogged and must be removed or if it passes the os accidentally, the aspirator must be emptied and “recharged.” It is sometimes more efficient to have more than one “charged” aspirator available for use, particularly at higher gestations
- The aspiration process is complete when no further tissue is seen passing through the cannula. Other signs of a complete aspiration are when pinkish foam is seen passing through the cannula, a gritty sensation is felt as the cannula passes over the surface of the evacuated uterus, and the uterus contracts around the cannula
- Typically, the vaginal speculum will be removed prior to examination of the aspirate. If there is any concern regarding completion of the aspiration, the client should remain in the treatment room until the products have been examined
- If indicated, insertion of intrauterine contraception or a contraceptive implant should occur after evacuation is determined to be complete

3. Tissue examination

- The evacuated tissue must be examined
  - The only exception is if a yolk sac and/or fetal pole were seen on ultrasound AND the procedure was done under continuous ultrasound guidance confirming evacuation
- Empty the contents of the aspirator into an appropriate container by removing the cannula, releasing the buttons if not depressed, and gently pushing the plunger completely into the cylinder. Do not push aspirated contents through the cannula
- Tissue may be viewed directly in the container into which it was emptied or may be rinsed in a strainer, immersed in water, and viewed with backlighting
- If MVA has been performed for a termination of pregnancy, a gestational sac must be identified. Seeing chorionic villi alone is not sufficient
- If the sac is not identified, perform a vaginal ultrasound. If no sac is seen in the uterus, send tissue for STAT histology and refer client immediately for evaluation of possible ectopic. If a sac is seen, reaspirate. Consider continuous ultrasound guidance during aspiration
- If MVA has been performed for retained products of conception or haematometra, a gestational sac may not be seen. Documentation of what was visualized should occur. Post-procedure ultrasound may also be helpful to document that the aspiration was complete.
- If, on inspection of the tissue, there is a concern about molar, ectopic or any other abnormal pregnancy, the aspirate must be sent for STAT histological
examination, the client should be informed, and an immediate referral made for further management.

4. Post-procedure care

- When the treatment doctor confirms that the procedure is complete, the client is assisted from the couch, allowed to dress and taken to a recliner chair to recover.
- As a minimum, one set of post-procedure observations should be recorded in the case notes.
- Refreshment is offered to the client at an appropriate time.
- When the client is fully recovered, she can be discharged according to the Nurse Discharge Procedure No.12.

Duration of stay in the clinic/unit

Procedure duration is typically 10-15 minutes and recovery time 30-45 minutes.

Antibiotic prophylaxis

Antibiotic prophylaxis should be provided to all clients prior to surgical termination of pregnancy (7).

Other Clinical Issues

Intrauterine contraception (IUC) in situ

If the client has an IUC in place, it should be removed at the time of the procedure.

Aftercare

A routine follow-up appointment is not necessary after an uncomplicated procedure (6). A pregnancy test at 3 weeks is not recommended after surgical abortion. If there is a question about complete evacuation or concern about ectopic pregnancy, the client should be referred for immediate evaluation. Prompt evaluation should occur for any client who continues to experience signs or symptoms of pregnancy 1 week after a surgical termination or if normal menses have not returned within 6 weeks (unless using progestin-only contraceptives).

The 24-hour Post Treatment Support Line telephone number (0800 247 1122) should be given to all clients along with guidance on use of this service.

Persistent bleeding following discharge

Persistent bleeding and/or cramping post-procedure may be a sign of retained products of conception or another complication. The client should return for evaluation to the relevant consultation centre or treatment unit.

Infection

If infection is suspected at the time of the procedure, appropriate antibiotic treatment should be given (e.g., azithromycin for *Chlamydia trachomatis*, metronidazole for...
bacterial vaginosis). The procedure may be completed on the day that treatment is initiated. If infection is suspected post-procedure, she should return to the relevant consultation centre or treatment unit for evaluation.

**Adverse drug reactions**

Suspected reactions should be reported using the Medicines and Healthcare products Regulatory Agency (MHRA)/Committee on Safety of Medicines yellow card system. Online reporting can be performed at http://www.mhra.gov.uk.

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**References**