Manual Vacuum Aspiration (MVA)

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Authors Name:			
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Guideline to be followed by (target staff): Women's & Children's Division / Women's Health / Consultants and Senior Registrars			
To be read in conjunction with the following documents:			
Are there any eCARE implications? No			

CQC Fundamental standards:
Regulation 9 – person centred care
Regulation 10 – dignity and respect
Regulation 11 – Need for consent
Regulation 12 – Safe care and treatment
Regulation 13 – Safeguarding service users from abuse and improper treatment
Regulation 14 – Meeting nutritional and hydration needs
Regulation 15 – Premises and equipment
Regulation 16 – Receiving and acting on complaints
Regulation 17 – Good governance
Regulation 18 – Staffing
Regulation 19 – Fit and proper

Disclaimer

Since every patient's history is different, and even the most exhaustive sources of information cannot cover every possible eventuality, you should be aware that all information is provided in this document on the basis that the healthcare professionals responsible for patient care will retain full and sole responsibility for decisions relating to patient care; the document is intended to supplement, not substitute for, the expertise and judgment of physicians, pharmacists or other healthcare professionals and should not be taken as an indication of suitability of a particular treatment for a particular individual.

The ultimate responsibility for the use of the guideline, dosage of drugs and correct following of instructions as well as the interpretation of the published material **lies solely with you** as the medical practitioner.

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Guideline Statement

There has been increasing experience of surgical treatment of miscarriage and termination of pregnancy using Manual Vacuum Aspiration (MVA) under local anaesthesia, and reports have suggested the safety, efficacy and high acceptability of this method.

Executive Summary

The purpose of this Guideline is to provide guidance on offering this treatment to those who are suitable and who wish to have the procedure carried out under local anaesthesia.

This Guideline refers to the use of MVA under local anaesthesia in the treatment of patients with:

- Early fetal demise 5-9(+0) weeks gestation estimated by ultrasound scan measurements
- Retained products of conception
- Failed medical management 5-9 weeks gestation by scan

Definitions

1.0 Roles and Responsibilities:

The MVA procedures will be carried out by trained Consultants and Senior Registrars.

2.0 Implementation and dissemination of document

The guideline will be implemented and disseminated by email and department teaching.

3.0 Processes and procedures

3.1 Inclusion criteria

- Suitable women with miscarriage requesting outpatient MVA
- Miscarriage 5-9+0 weeks (scan diagnosed)
- Retained products of conception
- Failed medical management of miscarriage
    - Haemodynamically stable
    - Parous women
    - Ultrasound diagnosis of early fetal demise with crown–rump length <25 mm
    - Ultrasound diagnosis of an incomplete miscarriage with retained products of conception measuring less than 5 cm (mean diameter).
    - No clinical signs of infection (fever, offensive discharge or generalised lower abdominal pain).

3.2 Exclusion criteria

- Suspected ectopic
- Allergy to misoprostol or local anaesthetic
    - haemorrhagic disorder and treatment with anticoagulants
- Uterine anomalies
- Retained products following SMOM
- Suspected molar
- Uterine infection
- Previous caesarean section
- Multiple pregnancy
- Inability to tolerate examination in the outpatient setting (age and parity to be considered)
    - >10 week period of gestation
    - panic attacks
    - cervical stenosis
    - fibroid uterus >12 weeks in size
    - postnatal retained products
    - uterine infection
    - retained products more than 5 cm

3.3 Consent

Women requesting surgical management of miscarriage (SMOM) who fit the inclusion criteria and can give informed consent will be counselled about their treatment options and offered MVA under local anaesthesia.

A patient information leaflet will be given and those wishing to have the procedure will be asked to sign a consent form.

Give and explain sensitive disposal information leaflet.

3.4 Pre-Procedure Preparation

- A formal transvaginal ultrasound stating the diagnosis and measurements of the CRL and/or gestational sac/RPOC must be available. A confirmation scan from a second sonographer should be available.
- Blood samples will be obtained for a full blood count and a blood group and save. This should be carried out within one week of the procedure for women who do not have atypical antibodies. The latter group, however, should be discussed with the haematology team and have a blood group and save sample taken within 24 hours of the procedure.
- The MVA procedure will be carried out at EPAU
- Written consent should be obtained from the woman.

- Cervical preparation with synthetic prostaglandin E_1 (misoprostol 400 micrograms) 2–3 hours prior to the procedure
- Misoprostol (400 micrograms) can be taken by the woman sublingually, orally or vaginally 2–3 hours prior to the procedure. This makes the cervix softer and easier to dilate with the plastic Karman cannula, thereby avoiding the use of a metal dilator, which may make the procedure less painful.
- For pain relief 400–800 mg ibuprofen can be given orally 1 hour before the procedure. In women with contraindications to nonsteroidal anti-inflammatory drugs, paracetamol and/or codeine can be used (Cocadamol 30/500mg) oral

- Women will be offered screening for Chlamydia or antibiotic prophylaxis (Azithromycin one gram taken orally post procedure.

Prior to the procedure an 18G green intravenous cannula will be inserted and baseline observations (blood pressure, pulse, temperature and respiratory rate) will be taken.

3.5 Procedure

The procedure will be carried out using a single-use 60 ml hand-held syringe with a self-locking plunger attached to a Karman curette (size 6-9 mm), under abdominal ultrasound scan guidance. The procedure is carried out under local anaesthetic in an outpatient setting. A doctor will perform the procedure, with the help of a nurse.
Following cleaning and draping in lithotomy, a gentle bimanual examination will be performed.

Anaesthetic gel (lidocaine hydrochloride, Instillagel) will be applied topically to the cervix, and local anaesthetic (lignospan - lidocaine hydrochloride 2%, Adrenaline 1 in 80,000, 2-3 ampules) will be subsequently infiltrated into the cervix in four quadrants, using a dental needle avoiding 3 and 9 'o clock position.

The anterior lip of the cervix is held with an Allis forceps, tenaculum or vulsellum. An appropriately sized cannula is introduced into the uterus and, if required, the cervical os is gently dilated with the rounded tip of the cannula. Alternatively, Hegar dilators can be used.
The charged syringe is then attached to the cannula. Once the syringe is fixed, the proximal valves on either side of the syringe are released and the operator moves the syringe in a rotating motion. The intrauterine contents will start being aspirated via the cannula into the syringe.
After the syringe is about 80% full with products of conception, it is detached from the cannula. The contents of the syringe are emptied into a bowl. The syringe is charged again and reattached to the cannula and the process repeated until the uterine cavity is empty.
At the end of the procedure the products in the bowl can be inspected for confirmation of products of conception and sent for histology.

An ultrasound will be performed at the end of the procedure to confirm that the uterine cavity is empty.

The procedure room in the EPAU should be equipped with emergency resuscitation equipment including intravenous cannulae, intravenous fluids, adrenaline (epinephrine), oxygen, atropine, oxytocin, misoprostol and a defibrillator, to handle common medical emergencies.

Careful selection of low-risk women is important to reduce the chance of unexpected emergencies

Role of ultrasound scan during manual vacuum aspiration (MVA) in outpatient setting:

Theoretically, using ultrasound may decrease the rate of perforation, ensure complete evacuation, avoid excessive curettage and thus prevent adhesions, but it depends on the operator's expertise in scanning and may increase the overall duration of the procedure. More studies are required to establish its benefits.

Several studies have shown MVA to be a safe, effective and acceptable alternative to electric vacuum aspiration with very high success rates.

Cost-effectiveness

The MVA syringe and cannula itself costs about £12. As MVA can be performed in the outpatient setting it also reduces the cost and use of theatre facilities. It has the advantage of early recovery and reduced hospital stay compared with EVA (Electric Vacuum Aspiration under GA).

Pain management

One of the most important factors for the success of outpatient MVA is the appropriate management of pain during and after the procedure. Women's experience with pain during MVA varies widely, with some women feeling no pain while others describe considerable pain. The source of the pain could be anxiety, cervical dilatation and/or uterine manipulation and evacuation. Adequate pain relief should be offered through pre-procedure and post-procedure analgesia, and adequate use of local anaesthesia. Nitrous oxide is useful for women who have severe pain during the procedure.

A woman's anxiety level strongly influences her perception of pain. Her level of comfort can be improved by different factors such as a procedure room that is quiet, comfortable and relaxing, and a clear explanation of what to expect before, during and after the procedure.

Healthcare professionals who are calm, friendly, empathetic, unhurried and efficient can also make a considerable difference.

Ethical issues

Women should be fully counselled on what to expect with each method and be given an information leaflet and sufficient time to decide. Detailed counselling about what to expect during the MVA procedure, aftercare and a specific telephone contact number to call if they need further discussion or support will help women to cope with the procedure better.

Training

The RCOG training courses on MVA are helpful for doctors new to the technique. These half-day training courses are organised annually by the RCOG. Trainees should ideally perform their first few MVAs under general anaesthesia in the operating theatre under the supervision of experienced staff using an MVA kit. This would help them familiarise with the equipment and procedure prior to performing MVAs on conscious women in the outpatient setting.

National Institute for Health and Care Excellence guidance on the management of miscarriage recommends that when clinically indicated, women should be offered the choice of MVA in the outpatient setting.

The acceptability of MVA among women could be considerably enhanced by effective counselling. Motivated, well informed and experienced clinicians, with careful selection of cases, proper training, regular audits and patient feedback would help to establish MVA as a safe and effective choice for women requiring surgical management of miscarriage.

3.6 Equipment

- Gynaecology couch with stirrups
- Recovery – reclining chairs
- Gloves, Drapes
- Entonox
- Procedure trolley
- ERPC tray:
  Simm's speculum
  Hagar dilators (3/4, 5/6, 7/8, 9/10)
  Vulsellum
  Sponge forceps X 2
- Disposable Cusco's speculum
- dental needle and syringe
- Local anaesthetic gel (lidocaine hydrochloride, Instillagel)
- Local anaesthetic ampoules (lignospan ; lidocaine hydrochloride 2%, Adrenaline 1 in 80,000)
- Histology specimen pot with formalin and ICE forms
- Ultrasound machine

- MVA aspiration kits:
  MVA syringe
  Karman curette (size 6-9 mm)
- Ultrasound machine
- Histology specimen pot with formalin and ICE forms

3.7 Recovery and Discharge

- The patient's blood pressure, pulse, temperature and respiratory rate will be monitored at 15 minute intervals for the first 30 minutes, then half-hourly following that. Women will be observed in hospital for two hours after the procedure prior to being discharged home.
- A leaflet outlining what to expect and relevant contact numbers should be given to women upon discharge.
- Women who are Rhesus negative will be given Anti-D prophylaxis according to Royal College of Obstetricians and Gynaecologists (RCOG) and Trust guidelines).

3.8 Complications

- The risk of surgical complications with MVA is similar to that experienced with surgical ERPC under general anaesthesia. Complications during MVA could include uterine and cervical injury, pelvic infection, incomplete evacuation, perforation, pain and vasovagal collapse.
- In the event of suspected uterine perforation, the woman will be advised to undergo a diagnostic laparoscopy to confirm the diagnosis and assess for visceral injury. The on call Consultant for gynaecology and the on call anaesthetist should be informed and arrangements should be made to transfer the patient to theatre following discussion with theatre staff.

Although the risk of experiencing a vasovagal attack with MVA is small, if this occurs, the procedure should be stopped, the head of the patient lowered and intravenous fluids given.

The majority of patients will recover following this, and the patient's blood pressure and pulse should be monitored. If this does not recover with these initial measures, further help should be sought. The MVA should be discontinued following a vasovagal attack, and if necessary, arrangements should be made to complete the procedure under general anaesthetic.

3.9 Follow-up

Patients will not routinely require a follow up at EPAU; an electronic discharge summary will be sent to the patient's GP.

Women will be informed about the potential complications related to the procedure through the patient information leaflet and asked to contact the Emergency Gynaecology Unit.

Women will be asked to do a pregnancy test in 3 weeks time and contact EPAU with the results.

3.10 Checklist for Outpatient MVA

Options counseling documented			
Protocol explanation documented			
Informed consent form: In chart			
Labeled			
Signed			
Rh status documented			
Anti D given (if indicated)			
USS documented			
Hemoglobin level documented			
All medication use documented			
HVS,Gonorrhea and Chlamydia done			
Post-op instructions reviewed with patient			

3.11 Nursing procedure for MVA

1.	**Gather and set up the needed equipment**
	Sterile instrument trays will be made up of the following: 2 sponge holders Single tooth tenaculum Sims speculum & Cusco Set of dilators Sterile gauzes Entonox
	Additional equipment for the procedure will be kept available: 10 cc syringes 21 gauge 2" needles 18 gauge 1" needlesIaspirators Cannulas sizes 5 through 10 Betadine Lidocaine 1% gel Lignospan special ampoule
2.	**Pre-Manual Vacuum Aspiration**
	Have patient empty her bladder and obtain a UCG Document the results in the chart Obtain Vital signs and document results in the chart Cover table paper with blue chuck. The EPAU nurse can pre medicate with an analgesic as per Providers' order Obtain documentation of Rh type and, if Rh negative, make sure a dose of Anti Dis available.
3.	**Intra Manual Vacuum Aspiration**
	Assist Provider with needed solutions, supplies and instruments Label specimen jar and ensure ice request done. Non viable fetus form to be filled if fetal parts seen and sent to mortuary.
4.	**Post-Manual Vacuum Aspiration**
	Obtain pulse and B/P, document the results in the patients' chart. Inform the provider of any changes Assist the patient in getting dressed and provide her with a sanitary pad Clean room and instruments Review the Patient Information Sheet with the patient Document all patient teaching done, the presence or absence of patient complaints and the stability of the patient upon departure from the clinic. Confirm that EPAU has follow-up information for where to reach patient for the next morning follow-up call.

3.12 Procedure note for MVA

Physical Examination:
Uterus: Size in weeks (bimanual): _____ AV/Mid / RV
Cervix, parous/nullip
Vagina: _____

Procedure:

☐ Cervix and vagina swabbed with Betadine.

☐ Lidocaine 1%, _____ml total injected.

☐ Tenaculum applied _____ o'clock.

☐ Cervix progressively dilated to: _____

☐ Cannula inserted, size _____

Estimated blood loss: _____ ml.
Additional comments:_____

Post-Op Assessment:

☐ Patient stable

☐ Pad checked for bleeding

☐ Post-procedure vital signs:

Time	BP	Pulse

Plan:

☐ Expected symptoms discussed; post-procedure instructions given.

☐ Anti-D if needed:_____

☐ ____ 1 gm Zithromax

☐

Clinician Signature:

4.0 Statement of evidence/references

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5.0 Governance

5.1 Document review history

Version number	Review date	Reviewed by	Changes made
1	October 2017		New document
2	03/2021		Complete review of document.

5.2 Consultation History

Stakeholders Name/Board	Area of Expertise	Date Sent	Date Received	Comments	Endorsed Yes/No
O & G Consultants		27.7.17		None	Yes
	Clinical Governance Facilitator	27.7.17		None	Yes
	Head of Midwifery	27.7.17		None	Yes
Matrons		27.7.17		None	Yes
MacMillan/Oncology/ Cancer Services		27.7.17		None	Yes
Coloscopy		27.7.17		None	Yes
	Audit and guideline midwife	10/02/2021		New WHO form	Yes
Women and children guideline group.	Women and children	31/03/2021			

Clinical improvement group (CIG)	Women and children	07/04/2021			

5.3 Audit and monitoring

Audit/Monitoring Criteria	Tool	Audit Lead	Frequency of Audit	Responsible Committee/Board
Uptake, indication, success	Prospectively		Annually	Women's Health CIG

5.4 Equality Impact Assessment

As part of its development, this Guideline and its impact on equality has been reviewed. The purpose of the assessment is to minimise and if possible remove any disproportionate impact on the grounds of race, gender, disability, age, sexual orientation, religion or belief, pregnancy and maternity, gender reassignment or marriage and civil partnership. No detriment was identified. Equality Impact assessments will show any future actions required to overcome any identified barriers or discriminatory practice.

Equality Impact Assessment			
Division	Women and Children	Department	Maternity
Person completing the EqIA		Contact No.	
Others involved:		Date of assessment:	10/02/21
Existing policy/service	Yes	New policy/service	No

Will patients, carers, the public or staff be affected by the policy/service?	Yes
If staff, how many/which groups will be affected?	

Protected characteristic	Any impact?	Comments
Age	NO	Positive impact as the policy aims to recognise diversity, promote inclusion and fair treatment for patients and staff
Disability	NO	
Gender reassignment	NO	
Marriage and civil partnership	NO	
Pregnancy and maternity	NO	
Race	NO	
Religion or belief	NO	
Sex	NO	
Sexual orientation	NO	

What consultation method(s) have you carried out?			
Meetings and emails			
How are the changes/amendments to the policies/services communicated?			
Email and meetings			
What future actions need to be taken to overcome any barriers or discrimination?			
What?	Who will lead this?	Date of completion	Resources needed
Review date of EqIA	04/2024		

Appendix 1: EPAU WHO Checklist

Early Pregnancy Assessment WHO Checklist

Surname:
Forename:
DOB:
Hospital No:
Or affix Patient Label

DATE

……

Pre-procedure

Patient identified correctly (name, DOB and address) (YES / NO)

Allergies (reviewed on patient notes and with patient) (YES / NO)

Patient information leaflet received prior to procedure (YES / NO)

Written / verbal consent obtained (on the day) (YES / NO)

Sharps number ( ) Swabs number ( )

Post-procedure

Procedure performed

……

Sharps number ( ) Swabs number ( )

Instruments checked (YES / NO)

No. of specimens ( ) Specimen(s) labelled correctly (YES / NO)

Issues to be highlighted

……

……

……

Specimen(s) labelled correctly and swab count completed by:

Name:	Signature:
Name:	Signature