The Shrewsbury and Telford Hospital NHS Trust

Surgical Management of Miscarriage Under LA Manual Vacuum Aspiration (MVA)

Version 2

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Comments	:	References to SaTH Guidelines in the text pertain to the latest version of the Guideline on the intranet. Printed copies may not be the most up to date version.

For triennial review

Version	Implementation Date	History	Ratified By	Full Review Date
1	November 2017	New guideline	Gynae Guidelines meeting and Gynae Clinical Governance	November 2022
2	20th June 2023	Updated Guideline	Gynae Clinical Governance	20th June 2026

1.0 Introduction

1.1 More than 1 in 5 pregnancies end in miscarriage. The experience of miscarriage is unique to each person and requires a sensitive and caring environment for the client and their partners.

1.2 It is recommended that all units should provide an early pregnancy assessment service to provide this care (RCOG 2006).

1.3 Following the scan diagnosis of non-viable pregnancy or retained products of conception, options offered to patients will include conservative, medical and surgical management.

2.0 Aim(s)

2.1 The aim of this guideline is to ensure that the optimum care is given and to provide a framework for appropriate management for a confirmed missed or incomplete miscarriage.

2.2 This guideline only applies to women who have a diagnosis of miscarriage or **persistent** pregnancy of unknown location – Refer to guideline "*Pregnancy of Unknown Location and the Inconclusive Scan: Investigation and Management*" for diagnosis and management of Persistent PUL.

3.0 Objectives

3.1 To provide clients with advice regarding choice of management and associated risk factors.

3.2 To ensure safety of the clients at all times.

3.3 To provide psychological support.

4.0 Definitions

4.1 **Manual Vacuum Aspiration**

- Surgical management of miscarriage under local anaesthetic using a self-charging vacuum syringe

4.2 **Miscarriage**

- A non-viable pregnancy confirmed using recognised national criteria.

4.3 **Persistent PUL**

- Situation where two scans at least 7 days apart have failed to locate a pregnancy, associated with a suboptimal change HCG.

5.0 Indications

- Confirmed Missed miscarriage
- Confirmed Incomplete miscarriage
- Persistent PUL where a viable pregnancy has been excluded by serial scan/HCG (i.e suspected retained products of conception)
- Selected cases of post-partum retained products (must have been seen by early pregnancy consultant to assess suitability)

6.0 Criteria

- Haemodynamically stable
- parous women
- well-motivated nulliparous women who can tolerate speculum examination
- 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).

7.0 Contraindications for MVA

- >10 week period of gestation based on ultrasound
- panic attacks

- fibroid uterus >12 weeks in size
- uterine malformation
- haemorrhagic disorder and treatment with anticoagulants
- allergy or contraindication to the use of local anaesthetic agents
- uterine infection
- inability to tolerate pelvic examination
- retained products more than 5 cm.
- Suspected Molar pregnancy – Relative Contra-indication
- Multiple Pregnancy – Relative Contraindication

8.0 Prior to procedure – EPAS

8.1 Planning procedure

- After a diagnosis of missed or incomplete miscarriage has been made, women will be reviewed the early pregnancy nurses to discuss the available options.
- MVA will be offered where women meet the criteria as above
- If a woman chooses the have MVA EPAS to liaise with a consultant who is trained in MVA to plan a suitable date and time.
- Where possible women should be seen in EPAS by the doctor who will be undertaking the procedure prior to the date
- Where this it not possible it is reasonable for the woman to be seen on the day of procedure so long as they have received full counselling and received the written information.
- A diagnosis of miscarriage MUST have been confirmed in line with current local and national guidance (confirmed by 2 sonographers or two scans a minimum of 7 days apart).
- Cremation and parental wishes forms to be completed

8.2 **Counselling, education and informed consent**

- Where possible it is preferred for women to be seen by a doctor in advance of the procedure to complete the consent form, advise of pain relief options, explain the procedure and any alternatives including the option of a general anaesthetic.
- Ensure information leaflet on Manual Vacuum Aspiration has been given to and read by the patient.
- The procedure, risks and alternatives should be explained to the client and all questions answered.
- Pain control during the procedure should be discussed.
  - The woman may be offered an analgesic in hospital 1 hour prior to the procedure. Suitable options include:
    - Diclofenac 100mg PO
    - Oramorph 10mgs
    - Ondansetron 4mg
    - Cervical block
- Alternatively, oral ibuprofen or paracetamol can be taken before attending.
- Intra cervical local anaesthetic will be provided unless client has an allergy or declines; this may be an injection and/or lidocaine gel.
- The woman should be advised that a health professional will be at her side during the procedure to be her advocate, providing reassurance and support.
- Cremation and parental wishes forms to be completed and histology forms if not already done.
- An initial set of observations should be taken i.e. Pulse, Blood pressure, Oxygen sats, respiratory rate.
- Informed consent should be obtained.
- Any client with a complex medical history, where suitability is not clear, should have her case reviewed with a consultant.

8.3 **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.
- Consider misoprostol 400mcgs 1 hour prior to surgery for asymptomatic primiparous women.

8.4 **Treatment**

- Before the treatment begins, the client should be introduced to the nurse/assistant and doctor, the procedure should be reviewed with her.
- The treatment doctor should review the client's medical history, gestational age dating (i.e. ultrasound). Any remaining questions that the client has should be answered before the procedure begins.
- 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 her legs put into the support, the hips should be flexed to about 45° and care should be taken in maintaining symmetry of leg positions.

8.5 **Uterine evacuation**

- Complete LOCCSIP prior to commencing treatment.
- 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-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.
- A tenaculum should be placed on the cervix to stabilise and align the cervical canal and uterine cavity during the procedure. Initial Injection of citanest at the site where the tenaculum will be placed can reduce discomfort from applying the instrument. Once applied an appropriate cervical block should be inserted.
- Instillation of intra-cervical Lidocaine gel is an option.
- The appropriate cannula and aspirator should be chosen.

MVA cannulas are made of rigid or flexible plastic and come in a range of sizes up to 12mm in diameter. Typically, the size of the cannulas used would match the gestational age in weeks. However, practitioners are often able to successfully and completely evacuate the uterus with cannula of smaller diameter: this may avoid the need for large degrees of cervical dilation and may be more comfortable for the client.

Single and double valve aspirators are available. Double valve aspirators can accommodate cannula up to 12mm; single valve aspirators can accommodate up to 6mm 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 passed the internal os; rotating the cannula with gentle pressure often helps ease insertion.
- Attach the charged 60ml 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 'charge' 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 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 intra-uterine contraception or a contraceptive implant should occur after evacuation is determined to be complete.

8.6 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 evacuation 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 only be viewed directly in the container into which it was emptied.
- If MVA has been performed for a missed miscarriage, a gestational sac must be identified. Seeing chronic 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 histology and refer client immediately for evaluation of possible ectopic pregnancy. If a sac is seen, reaspirate.
- Consider continuous ultrasound guidance throughout aspiration.
- If MVA has been performed for retained products of conception or haemotometra, a gestational sac may not be seen. Documentation of what was visualised 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 histological examination, the client should be informed and an immediate referral made for further management.
- Consider serial HCG to confirm removal of pregnancy tissue where the procedure has been done for suspected retained products of conception.

9.0 Post-procedure care

- When the treatment doctor confirms that the treatment is complete, the client is assisted from the couch, allowed to rest and taken from to a recliner chair to recover.
- The woman will be recovered in GATU
- 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 by the nurse.

10.0 Duration of stay in the clinic/unit

- Procedure duration is typically 10-15 minutes and recovery time 30-45 minutes.
- Rhesus Negative women will require anti D as per the anti D guideline.

11.0 Aftercare

- A routine follow up appointment is not necessary after an uncomplicated procedure. A pregnancy test at 3 weeks is not recommended after surgical management in asymptomatic women.
- For women who require follow up please inform EPAS if not already aware.
- If there is a question about incomplete 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 MVA or if normal menses have not returned until 6 weeks.

12.0 Persistent bleeding following discharge

- Persistent bleeding and/or cramping post-procedure may be a sign of retained products of conception or another complication. The patient should return for evaluation to the relevant treatment unit for ongoing bleeding after two weeks.

13.0 Infection

*If subclinical infection is suspected at the time of procedure but it is deemed safe to continue, appropriate anti-biotic treatment should be given (eg Azithromycin for Chlamydia trachomatis, metronidazole for bacterial diagnosis). The MVA may be completed on the day treatment is initiated. If infection is suspected post procedure, she should return to the relevant treatment unit for evaluation.

14.0 Training

14.1 All staff employed by SATH will be informed how to access guidelines on the intranet.

14.2 Information regarding new and update guidelines is circulated by email/memo to medical and nursing staff, and presented at governance feedback

15.0 Audit

This guideline will be subject to departmental audit using the following standards:

1) Women are given complete verbal and written information on options for management of miscarriage and MVA (100%)
2) Women are appropriately consented including the risks, benefits and alternatives (100%)
3) All procedures are performed by, or under direct supervision of an appropriately trained consultant (100%).
4) Non-viability has been clearly confirmed prior to MVA with serial ultrasound and/or serial HCG. (100%)

"*Compliance with this guideline / SOP will be audited as part of the Shrewsbury and Telford Hospital NHS Trust's five-year rolling programme of NICE and local guideline audits, unless circumstances require an earlier or more frequent audit. The audit will be carried out using the auditable standards and the results will be reported and acted on in accordance with the Trust Clinical Audit Policy (CG25*)"