

Our First Experience with Outpatient Surgical Management of Miscarriage – Manual Vacuum Aspiration (MVA) in NHS Lanarkshire



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1. Why Chose an MVA?

- Manual Vacuum Aspiration (MVA) is a procedure to remove pregnancy tissue from the uterus and utilises a hand-held suction device
- Can be used for surgical management of miscarriage, RPOC or ToP
- Studies have shown MVA to be a safe and cost-effective procedure and is successful in 96% to 98% of cases
- Compared to a traditional Surgical Evacuation:
 - MVA represents 1/6 of cost of an EVAC (1)
 - Patient avoids a general anaesthetic
 - MVA can be carried out in clinic/outpatient setting rather than theatre
 - Patient can be discharged 1 hour post procedure
 - Patient does not need to fast



2. Study Objectives

- The MVA service was set up in September 2021 in NHS Lanarkshire as an alternative to traditional Surgical Evacuation of the uterus under GA (EVAC)
- With 591 EVACs carried out in NHSL in 2018/2019 there is significant opportunity for cost-saving to the trust in addition to giving patients greater choice in their management options.

- To audit the MVA service to standards set by NHSL MVA Protocol(2) and NICE Guidelines(1).
- To review the MVA Patient Experience in relation to patient experience, complications, procedure success/failure and length of admission.

3. Design

- Prospective audit undertaken during the period January 2021 to May 2021.
- NHSL Inclusion Criteria for MVA – up to 10 weeks gestation
 - Missed miscarriage (early fetal demise) of gestation (by CRL measurement)
 - Anembryonic pregnancy with a gestation upto 10 weeks
 - Incomplete miscarriage under upto 10 weeks of gestation
 - Patients in the above group following failed medical management

4. Methods

- All patients attending UHW Early Pregnancy Assessment Services (EPAS) for elective MVA during the study period were included
- A pro-forma was used for data collection on the day of procedure
- Patient notes and documentation were reviewed on the “Badger” system (electronic maternity notes).

5. Results

- 52 patients had an elective MVA within January – May 2021
- Completed proformas: **n = 51**

- Age range: 18 to 44
- 29% (n=15) patients had previous losses
- BMI range: 20.7 to 37

5.1 Audit

- 8 out of 11 audit standards met

Standard	Descriptor	Result (%)	Standard met
1	Be eligible under Inclusion criteria	100	✓
2	Had all options for management discussed	94	✗
3	Signed consent form	100	✓
4	Signed sensitive disposal form	100	✓
5	Misoprostol administered before procedure	100	✓
6	Analgesia administered before procedure	100	✓
7	Antibiotics administered before procedure	100	✓
8	USS to confirm cavity empty	100	✓
9	Blood loss recorded	66	✗
10	PoC sent for histology	100	✓
11	Provided with written information	78	✗

Table 1: Audit Standards and Results

5.2 MVA Review & Patient Experience

- Majority of cases (80%; n=41) were carried out for **missed miscarriage**
- 51% of patients had MVA at **< 7 weeks gestation**
- MVA was **successful in 98%** (n=50) with only one failed procedure (2%)
- The average time for an MVA was **16 mins**.
- The average time for the entire patient stay in hospital was **4 hours 37 minutes**.
- Pain score of 6 or less** (on scale 1 to 10) was reported by 76% of patients
- In **90% there were no immediate complications** and 94% reported no later complications

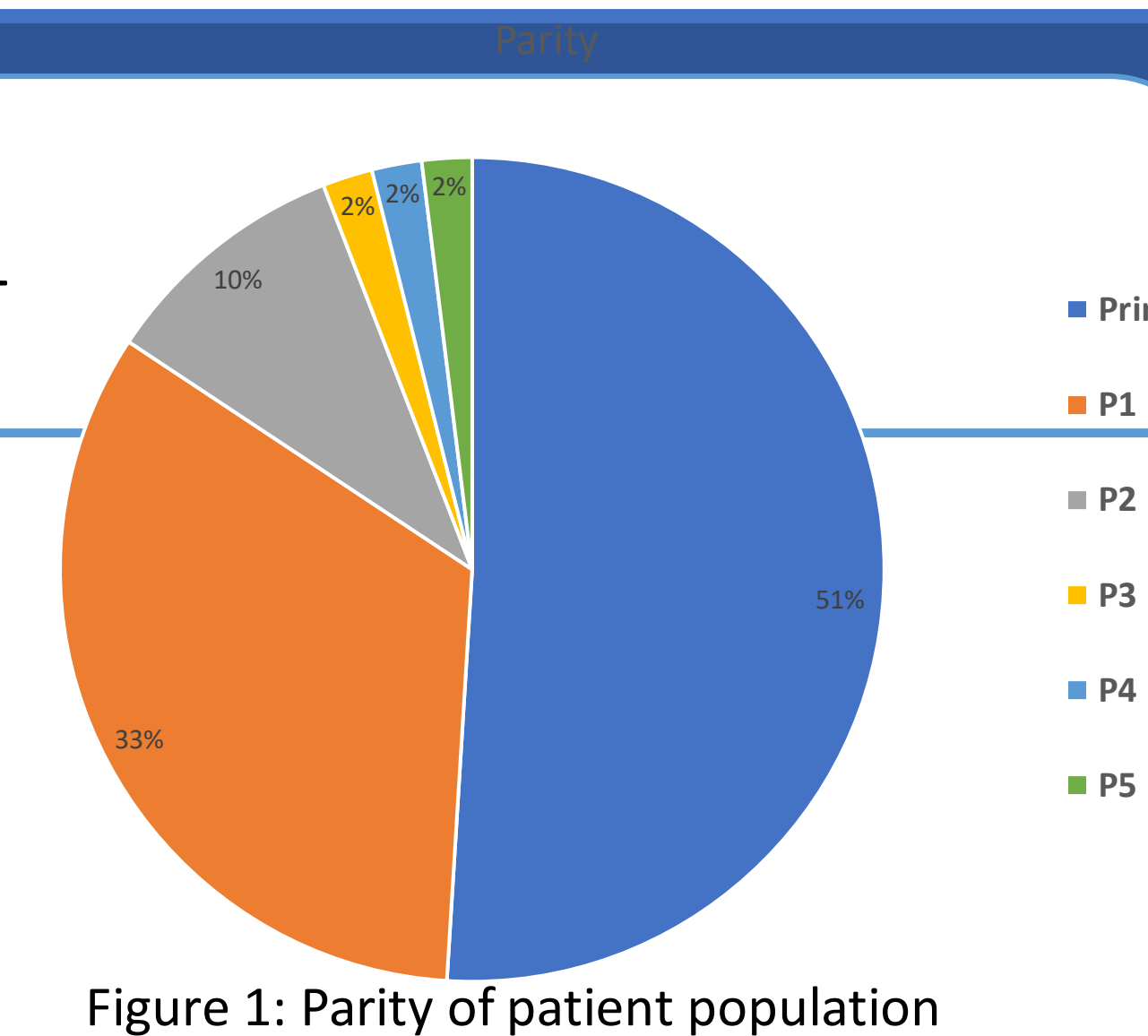


Figure 1: Parity of patient population

6. Discussion

- 8 of 11 audit standards were met – those not met were in relation to poor documentation eg blood loss (assumed to be minimal) or incomplete documentation of discussions
- The **MVA procedure was very well tolerated** – majority of patients reported pain score of 6 or less – analgesia for the procedure was a Cervical block +/- Entonox
- The only failed MVA was due to patient distress and the procedure was abandoned
- Very low rates of minor complications** were reported:
 - 90% had no immediate complications - those reported included nausea & feeling dizzy
 - 94% reported no later complications – 2 patients were treated for UTI within 1 week
- The entire admission time on average for a patient was 4hrs 37mins
 - This is significantly less when compared to admission for daycase surgical evac under GA and therefore has less disruption to the patient whilst also avoiding the risks of GA
- 98% had a negative home UPT** at 3 weeks post procedure
 - 1 patient had positive home UPT but negative serum hcg
- Limitations of the study include relatively small sample size (n=51). It is also important to highlight the entire sample had suffered pregnancy loss as at present we do not offer MVA for termination of pregnancy

7. Future Development

Following the success of the MVA Service for miscarriage, NHS Lanarkshire next steps include:

- Increasing the number of MVA lists per week to meet the demand from patients
- Training opportunities for staff to gain confidence in using MVA equipment, particularly in emergency scenarios
- Increasing scope of MVA lists to include ToP as an alternative to STOP

8. Conclusions

Overall, the MVA service has been successfully set up:

- MVA procedures were **highly successful** and were generally tolerated well by the patients with very **low rates of minor complications**.
- It is clear that MVA is a suitable option for surgical management of miscarriage offering both benefits to patients and **significant cost saving** to the trust

References

- NICE Guideline 140, Abortion Care, September 2019 <https://www.nice.org.uk/guidance/ng140>
- Manual Vacuum Aspiration in Outpatient Setting, NHSLanarkshire, September 2020