

MEDICAL MANAGEMENT OF SECOND TRIMESTER PREGNANCY LOSS: A RETROSPECTIVE COHORT STUDY OF ELECTIVE PROCEDURES BETWEEN 12⁺⁰ – 17⁺⁶ WEEKS GESTATION

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INTRODUCTION

The management of women undergoing second-trimester medical procedures varies significantly both nationally and globally, regardless of the indication for the procedure. Of note, there is limited guidance regarding appropriate timeframes for the third stage of labour in these cases. Furthermore, guidance regarding the management and escalation of complications (such as retained placenta or excessive vaginal bleeding) is lacking.

To understand the complexities surrounding the third stage of labour, it is important to consider the incidence of events resulting in second-trimester vaginal births. These births typically occur through one of three pathways: second-trimester miscarriage, termination for social reasons and termination due to foetal abnormalities.

METHODS

We undertook a retrospective cohort study of all elective medical procedures taking place on the dedicated gynaecology unit in a tertiary referral university hospital over a two-year period. An upper gestational limit of 17⁺⁶ weeks was adopted. 120 patients were identified via the gynaecology ward booking diary. We reviewed the electronic case notes of 108 women between the ages of 15 – 46. Exclusion criteria were emergency admissions (n=1), incomplete electronic records (n=3) and patients outside of the gestational window 12⁺⁰ – 17⁺⁶ (n=8).

The local guideline recommends 200mg of Mifepristone (a progesterone antagonist) with a regime of Misoprostol (prostaglandin E1 analogue) 48 hours later to stimulate cervical softening, dilation and uterine contractions. The regime consists of 800mcg vaginally, followed by 400mcg orally every 4 hours for a maximum of 5 doses.

Our primary objective was to determine the incidence of retained placenta and to compare this with medical procedures where placental delivery occurred spontaneously. In addition, we sought to investigate if the incidence of unplanned surgical procedures and blood loss was increased when the interval from foetal delivery to placental delivery was higher.

RESULTS

There were 108 medical procedures performed over the study period; 29.6% (n = 32) were terminations for medical reasons (TFMR) all of which were for foetal abnormalities. 18.5% (n = 20) were following a diagnosis of a missed miscarriage (MMC) and 51.9% (n = 56) were terminations for social reasons (Social TOP). Spontaneous expulsion of the placenta occurred in 57.4% (n = 62) of procedures and 25% (n = 27) of patients underwent manual removal of the placenta (MROP) via Cusco’s vaginal speculum and Rampley sponge holder forceps at the bedside. 17.6% (n = 19) of patients underwent emergency surgical removal of placenta (ERPC) with general anaesthetic.

	Overall	TFMR (n=32)	MMC (n=20)	Social TOP (n=56)
Age	30.2 (SD ±7.31)	33.2 (SD ±4.7)	33.7 (SD ±5.8)	27.2 (SD ±7.2)
Nulliparous	36.1% (n=39)	43.8% (n=14)	20% (n=4)	37.5% (n=21)
Multiparous	63.9% (n=69)	56.3% (n=18)	80% (n=16)	62.5% (n=35)
Previous vaginal delivery	59.1% (n=53)	46.9% (n=15)	45% (n=9)	51.8% (n=29)
Smoker	24.1% (n=26)	9.4% (n=3)	0% (n=0)	41.1% (n=23)

Table 1: Patient demographics | (n = number of cases)

Table 2 demonstrates the characteristics of patients in respect of the mode of delivery of the placenta. There were no statistically significant differences between age, parity or whether a previous vaginal birth had occurred. 73.4% (n = 14) of patients who required ERPC had a blood loss over 500ml, vs 40.7% (n = 11) of women who required bedside MROP. No woman experienced a blood loss greater than 500ml when expulsion was spontaneous.

	Spontaneous (n = 62)	MROP (n = 27)	ERPC (n = 19)
Indication:			
TFMR	(n = 17) 27.4%	(n = 11) 40.7%	(n = 4) 21.1%
MMC	(n = 7) 11.3%	(n = 4) 14.8%	(n = 9) 47.4%
Social TOP	(n = 38) 61.3%	(n = 12) 44.4%	(n = 6) 31.6%
Parity:			
Nulliparous	(n = 24) 38.7%	(n = 10) 37.0%	(n = 5) 26.3%
Multiparous	(n = 38) 61.3%	(n = 17) 63.0%	(n = 14) 73.7%
Previous vaginal birth	(n= 29) 46.8%	(n = 13) 48.1%	(n = 10) 52.6%
Age	30.0 (SD ±7.54)	29.5 (SD ±6.92)	31.7 (SD ±7.27)
Blood loss			
500 - 999ml	N/a	(n = 8) 29.6%	(n = 3) 15.8%
1000 – 1499ml	N/a	(n = 2) 7.41%	(n = 4) 21.1%
1500 – 1999ml	N/a	(n = 1) 3.7%	(n = 3) 15.8%
2000ml +	N/a		(n = 4) 21.1%

Table 2: Patient characteristics of placental modes of delivery

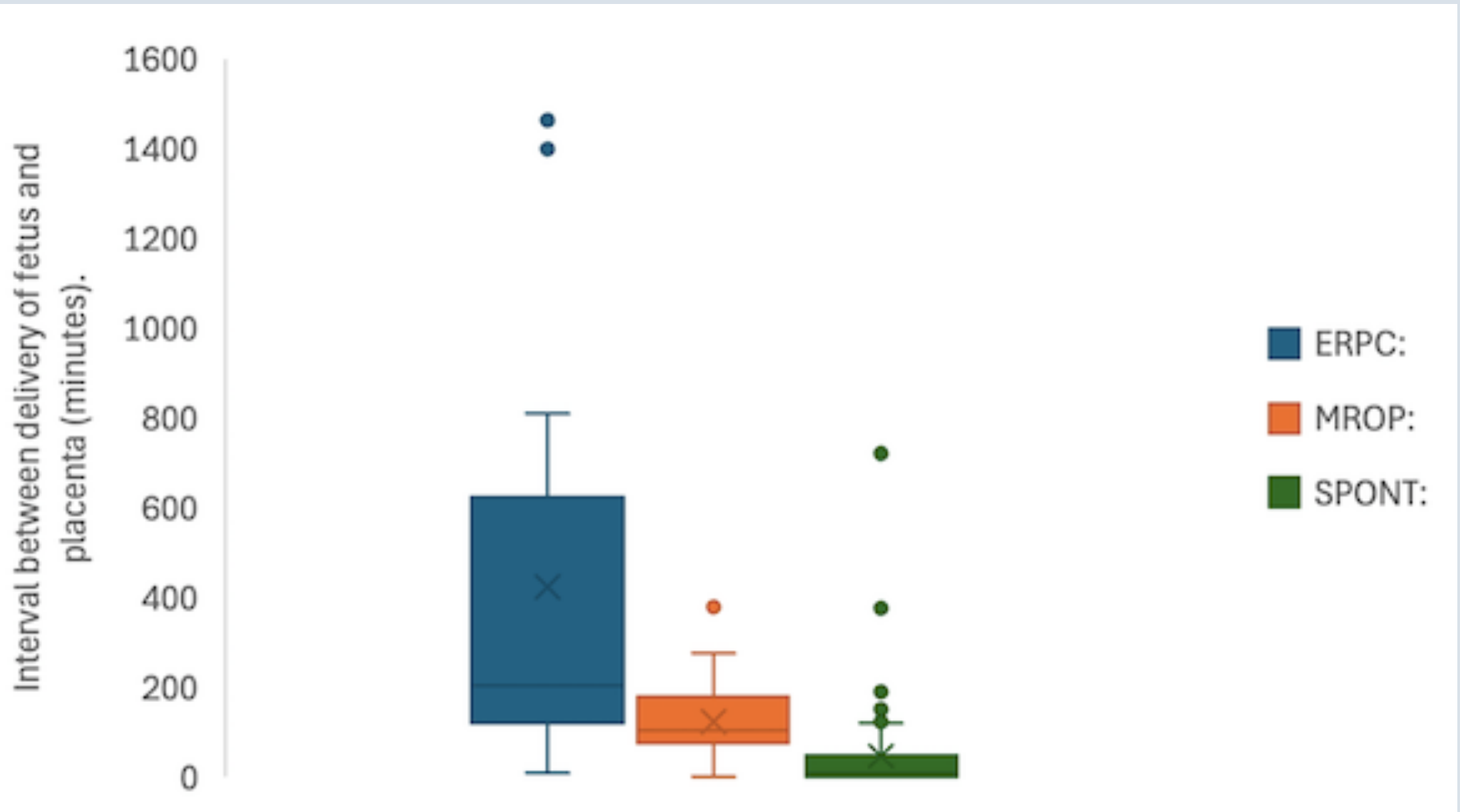


Figure 1: Interval between delivery of placenta and expulsion of fetus. Graph demonstrating range and outlier time intervals depending on mode of placental delivery.

DISCUSSION

Our study demonstrates that medical termination of pregnancy in the second trimester is associated with significant risk of morbidity and unplanned intervention to deliver the placenta. When intervention does occur this is associated with an increased risk of haemorrhage (particularly severe haemorrhage requiring blood transfusion) beyond what the current literature would suggest. While there were no statistically significant differences in patient demographics, 45% (n = 9) of patients undergoing the procedure when indicated by missed miscarriage required an ERPC. This should be highlighted to patients as a potential risk factor.

There is no national guidance for managing the 3rd stage in second trimester vaginal births. However, there is a demonstrable increased risk for unplanned surgical intervention and haemorrhage when there is a delay in placental delivery. We suggest the following guidance for term vaginal deliveries with escalation if the placenta has not been expelled within 30 minutes of foetal delivery, so that safe and timely intervention can occur.

17.6%

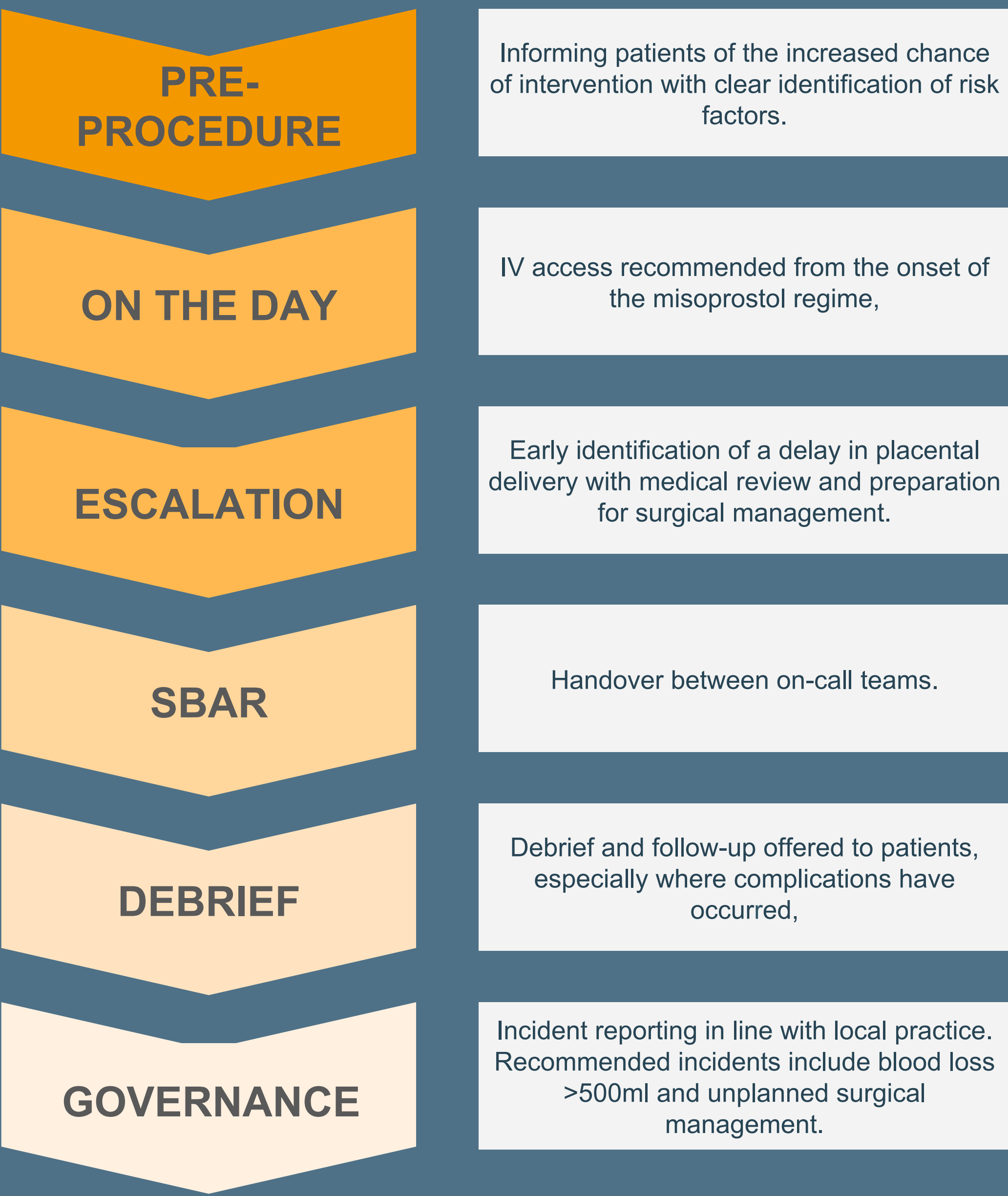
UNPLANNED
Evacuation of Retained
Placenta

23.1%

Blood loss >500ml

CONCLUSION

Our study provides up-to-date risks of complication and the need for clinician involvement in delivery of the placenta. We propose the following checklist to aid in service development.



REFERENCES

National Institute of Clinical Excellence (NICE) (2025) Abortion Care: *Recommendations Medical Abortions between 10+0 and 23+6 weeks*. NG140. (Accessed 9th June 2025).

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