Impact of an updated medical management protocol using misoprostol for missed miscarriage

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Introduction

At the Royal Prince Alfred Hospital (RPAH) early pregnancy loss is managed medically using misoprostol, however there are differing protocols for dosage and follow up. Following a 2005 study[1], the RPAH protocol changed from a single 800µg dose of misoprostol and follow up in 2 weeks, to follow up in 2 days, with a second 800µg dose given where necessary. **This study aims** to determine if the updated protocol leads to more successful outcomes and less complications for women.

Methods

We undertook a retrospective observational study using medical records from women who opted for medical management at the early pregnancy assessment outpatient clinic of a tertiary hospital between 2014 and 2017. Each patient was followed for 8 weeks for post procedure complications. A successful treatment was defined as endometrial thicknesss <15mm on ultrasound.

Results

125 records from 2014-2017 were included. 59 women were managed under the single dose protocol, and 66 were managed under the dual dose protocol. Comparison of the mean age and mean gestational age at presentation between the two treatment protocols was used to ensure similarity of these aspects between the two groups (Table 1). Similarly, the reasons for presentation were compared (Table 2).

	Old Protocol	New Protocol	ANOVA P-value
Mean Age (Years)	34.2	34.9	1.00
Mean Gestational Age At Presentation (Weeks)	9.1	8.9	0.737

Table 1. Comparison of age and gestational age at presentation to EPAS, with ANOVA showing no significant difference between cohorts.

Reason For Presentation	Old Protocol	New Protocol	Pearson Chi-square P-value
Pain	13	10	0.303
Bleeding	27	22	0.137
USS Finding	39	46	0.760
Inappropriately Rising BHCG	6	3	0.216
Other	1	1	0.928

Table 2. Comparison of reason for presentation at EPAS, including Chi-square analysis showing no significant difference between cohorts.

We analysed the differences in success rates between the two protocols. Of those treated with the older single dose protocol **49.2% (29/59)** were successful following their first management, compared to **66.7% (44/66)** of those treated with the newer, two dose protocol ($\chi 2=3.933$; p=**0.047)**. However there were greater reported ED presentations of women following the newer protocol (4 versus 1), with one woman requiring a blood transfusion, and another presenting with vaginal bleeding who required an emergency dilatation and curettage.

Conclusions

The new protocol has increased success rates for first treatment when women elect to have their miscarriage managed medically.

There has been a slight increase in complication rates, however the full impact of this may only be elicited with increased numbers.

Further analysis of treatment decisions for women who fail their first intervention is required to ensure that women failing their first intervention are not requiring significant additional interventions.

References

1. Zhang, J. et al. NEJM. 2005;353(8).

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