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Medical Management of Missed Miscarriages During First Trimester: A Descriptive study

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Abstract

Introduction: First trimester missed miscarriage is a relatively common situation among pregnant women. Basic management options are expectant, medical and surgical for missed miscarriages, with Misoprostol being safe and effective medical management.

Objectives: Our aim is to describe the obstetric, demographical and radiological factors associated with managing first trimester missed miscarriage with Misoprostol. s

Material and Methods- This descriptive study was conducted at GMC Baramulla. First trimester missed miscarriage (<12 weeks) medically managed were selected. Analysis of data was done by using SPSS Software.

Results: 150 women were recruited for the analysis. Overall success rate of vaginal Misoprostol was 60%.

Conclusion: The current study provides an important overview of demographic and clinical characteristics of patients managed for first trimester missed miscarriage.

Keywords: Miscarriages, First timester miscarriages and Misoprostol

Introduction

Miscarriage is one of the commonest early pregnancy complications encountered in clinical practice[1234]. If diagnosed before passing products of conception, then condition is defined as miscarriages. Majority of miscarriages occur before 12 completed weeks of gestation[5] Most of spontaneous miscarriages are due to chromosome abnormalities in the conceptus[6]. While as first trimester missed miscarriage causes significant psychological and physical and social trauma to a pregnant woman, thereby increasing risk of anxiety and depression in these women from pregnancy loss[6].

Medical management of miscarriage has been increasingly in use, providing an alternative management to surgery thereby avoiding the costs and risks of anaesthesia and surgery[7,8]. Medical management, consisting of misoprostol administered sublingually, orally or vaginally is reported to provide a greater success rate compared to expectant management with [9-13]. Success rates of medical management of missed miscarriages range somewhere between 60-90 % [7,10,11,14,15]. A woman with incomplete miscarriage, hemodynamically stable and free of infection will be first line management option suggested by NICE guideline [16,17].

Positive results of medical management of missed miscarriages were found in a double-blinded placebo-controlled study where 64 miscarriage patients were randomized to a single dose of vaginal misoprostol 400 mcg and another 62 patients to placebo (success rates of 81% and 52% respectively were achieved within one week)[18]. Nausea, vomiting, abdominal cramps, diarrhea and fever are few common side effects of this drug[19,20]. The objective of this study was to measure the success of misoprostol regime in women with miscarriage.

Material and Methods

This study was conducted at Government Medical College Baramulla in the department of Gynaecology and Obstetrics from March 2023 to March 2025 to describe the demographic, obstetrics and radiological parameters associated with first trimester pregnancy loss and its medical management. First trimester missed miscarriage was diagnosed according to the NICE guidelines and included into the study. This diagnosis was based on ultrasound scan findings[17]. Embryonic miscarriage was diagnosed according to following two criteria.

1. When crown-rump length (CRL) <7mm with a transvaginal ultrasound scan (TVS) and with mean gestational sac diameter (MGSD) <25mm with TVS. Absence of cardiac activity and fetal pole should be confirmed in at least two consecutive TVS, done at least 7 days apart
2. When CRL>7mm with a TVS and with MGSD >25 mm. Absence of fetal cardiac activity and absence of fetal pole should be confirmed by two independent operators.

Besides this, Post Misoprostol endometrial thickness <15mm with TVS was considered as successful medical management or complete uterine evacuation [21].

Inclusion Criteria:

1.Gestagional Age Pregnancy loss < or up to 13 weeks of gestational age, managed with two doses of 800 micro grams vaginal Misoprostol and given 3 hours apart (Ministry of Health guideline [22]) were selected to this study as the study population.

2.Confirmatory Diagnosis via clinically/USG

3.Haemodynamically stable Patients.

Exclusion Criteria:

1 Suspected or confirmed Ectopic Pregnancy

2 Sepsis

3 Allergy to Misoprostol

4.Severe Anaemia

5.Haemorrhagic Disorders

Results

The total number of cases available for analysis was 150 out of 190, with given features recorded (Table 1: Features Collected). Two additional features were derived by combining two recorded data points (POA in Days from POA Weeks and POA Days Components, Blood Group from ABO and Rh

Table 1: Features Collected

S.No	Parameter	Type
1	Age	Numerical
2	Blood Groups	Categorical
3	Menstrual period certainty	Categorical
4	Total pregnancies including this pregnancy	Numerical
5	Number of living children	Numerical
6	Number of vaginal deliveries	Numerical
7	Number of caesarean sections	Numerical
8	Previous abortions	Numerical
9	Treatment for previous abortions	

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10	Gravida	
11	Bleeding through cervical Os during speculation examination	
12	History of Prevaginal bleeding	
13	Presence of fetal poles	
14	Medical Management Result	
15	Next Step when unsuccessful	
16	Side Effects experienced by the patient	
17	Special events during hospital stay	

Table 2: Age distribution

Age Group	Frequency	Percent
20-24	26	17.33
25-29	33	22
30-34	61	40.60
35-39	15	10
40-45	15	10
Total	150	100

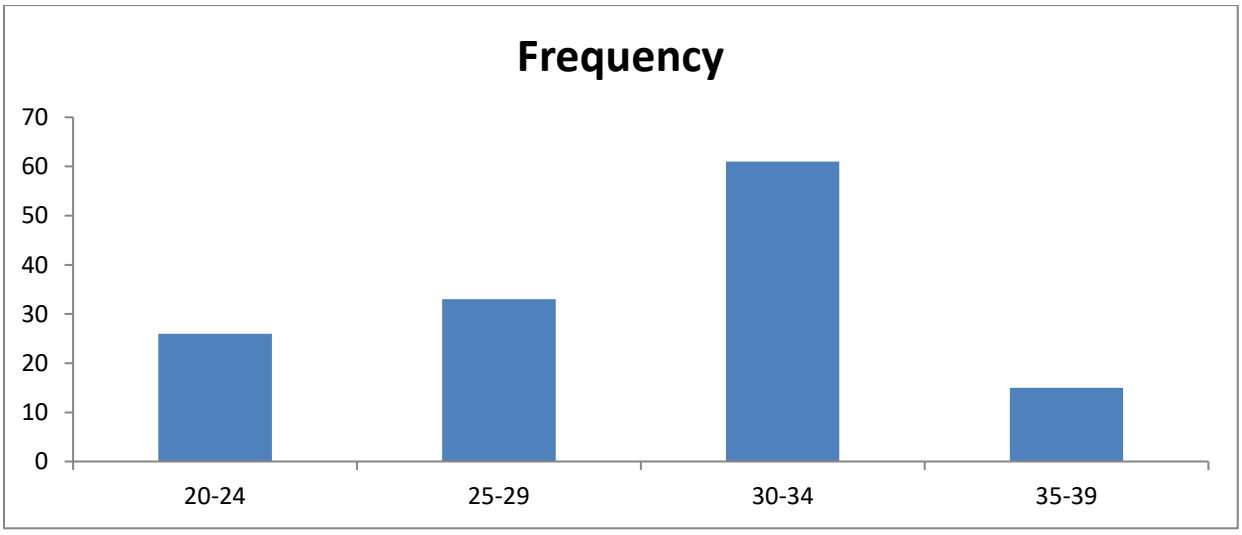

Figure 1. Age distribution

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Table 3 : Blood Groups

Blood Group type	Frequency	Percent
A	30	20.00
B	35	23.33
AB	9	6.0
O	56	37.33
Missing	20	13.33
Total	150	

Table 4: Last menstrual period certainty

Certainty	**Frequency**
Yes	145
No	3
Missing	2
Total	150

Table 5: Number of Pregnancies

Number	Frequency	Percent
1	49	32.66
2	39	26.00
3	34	26.66
4	21	14.00
5	7	4.66
Total	150	

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Table 6: No of Living Children

Number	Frequency	Percent
0	56	37.33
1	42	28.00
2	30	20.00
3	19	12.66
4	3	2.00
Total	150	

Table 7: Number of Vaginal deliveries

Number of Vaginal deliveries	Frequency	Percent
0	78	52.00
1	34	26.66
2	28	18.66
3	8	5.33
4	2	1.33
Total	150	

Table 8: Number of Caesarean sections

Number of caesarean sections	Frequency	Percent
0	120	80.00
1	25	16.66
2	5	3.33
Total	150	

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Table 9: History of previous abortions

Previous abortions	Frequency
No	127
Yes	23
Total	150

Table 10: Treatment for previous abortions

Treatment Method Adopted	Frequency	Percent
Medical management	45	30
Medical and surgical management	8	5.33
Spontaneous expulsion	12	8
Missing	85	56.66
Total	167	

Table 11: Gravida

Gravida	Frequency	Percent
1	50	33.33
2	38	25.33
3	36	24.00
4	21	14.00
5	5	3.33
Total	150	

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Table 12: Bleeding through cervical during speculation examination

Response	Frequency
Yes	129
No	21
Total	150

Table 13: History of per vaginal bleeding

Response	Frequency
Yes	125
No	25
Total	150

Table 14: Presence of fetal poles

Response	Frequency
Yes	130
No	20
Total	150

Table 15: Result of medical management

Outcome	Frequency	Percent
Valid	1	0.66
Successful	94	60.00
Unsuccessful	55	55.00
Total	150	

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Table 16: Next Management step for successful medical treatment

Treatment adopted	Frequency	Percent
Valid	95	63.33
ERPC	45	30.00
Repeated Misoprostol	10	6.66
Total	150	

Table 17: Side effects profile

Side Effects	Frequency	
Valid	118	78.66
Abdominal cramps	2	1.33
Abdominal cramps and faintishness	1	0.66
Faintishness	3	2.00
Fever	12	8.00
Fever and chills	4	2.66
Fever nausea vomiting	1	0.66
Nausea vomiting faintishness	8	5.33
Tachycardia	1	0.66
Total	150	

Discussion

The present study aimed to explore medical treatment with misoprostol regimen for early pregnancy failure at our institution. Positive results of medical management of missed miscarriages were found in a double-blinded placebo- controlled study where 64 miscarriage patients were randomized to a single dose of vaginal misoprostol 400 mcg and another 62 patients to placebo (success rates of 81% and 52% respectively were achieved within one week)[18], these results were consistent with results in present study[18]

The presence of certain features, such as gravidity and blood group distribution, is consistent with findings from similar studies conducted in different regions. These characteristics are useful for understanding the patient profile and tailoring treatment protocols accordingly. Even though success rate of the medical management in this study came as 60%, success rate which was reported by one of the

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previous Sri Lankan studies was 54% [22]. International literature shows that this varies between 54% to 84%[18].

A randomized controlled trial (RCT) conducted in Pakistan compared the efficacy of manual vacuum aspiration (MVA) and misoprostol in management of first trimester incomplete miscarriage Both treatments had higher efficacy rate which were consistent with results in our study[8]. In general, the results across literature provide strong evidence in favour of medical management of first trimester missed miscarriages.

Despite some limitations, the study offers useful insights for policymakers and clinicians working to improve care for patients with first trimester missed miscarriage

CONCLUSION:

The present study concludes medical management of first trimester missed miscarriages can avoid surgical evacuation and related complications. Patients opting for medical treatment may require hospital readmission for further treatment in case of failure. . The study highlights the need for further research into the socioeconomic and psychological factors associated with early pregnancy failure, as well as the development of more standardized data recording practices Our study provides quantified estimations of the success and complication rates to counsel women in an evidence-based manner

CONFLICTS OF INTEREST: NIL

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Ethical Approval: The present study was approved by institutional ethical committee.

References

1.Quenby S, Gallos ID, Dhillon-Smith RK, Podesek M, Stephenson MD, Fisher J, et al. Miscarriage matters: the epidemiological, physical, psychological, and economic costs of early pregnancy loss. Lancet. 2021;397(10285):1658-1667. doi: 10.1016/S0140-6736(21)00682-6

2. Cunningham FG, Nelson DB. Disseminated intravascular coagulation syndromes in obstetrics. Obstet Gynecol. 2015;126(5):999-1011. doi: 10.1097/AOG.0000000000001110

3. Jaleel R, Khan A. Paternal factors in spontaneous first trimester miscarriage. Pak J Med Sci. 2013;29(3):748-752. doi: 10.12669/ pjms.293.3388

4. (2006). Royal College of Obstetricians and Gynaecologists. The management of early pregnancy loss. Green top Guideline No. 25. London (UK): RCOG.

5. Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, et al. Williams's obstetrics: McGraw-Hill Medical New York; 2014.

6. Graiebel CP, Halvorsen J, Golemon TB, Day AA. (2005). Management of spontaneous abortion: American Family Physician, 72(7):1243-1250

7. Serdinšek T, Reljič M, Kovač V. Medical management of first trimester missed miscarriage: the efficacy and complication rate. J Obstet Gynaecol. 2019;39(5):647-651. doi: 10.1080/01443615.2018.1535577

8. Bano K, Talat IS. Alternative to surgical evacuation of uterus: Misoprostol for post abortion care. J Surg Pak. 2009;14(1):53-57.

9. Beaman J, Prifti C, Schwarz EB, Sobota M. Medication to manage abortion and miscarriage. J Gen Intern Med. 2020;35(8): 2398-2405.doi: 10.1007/s11606-020-05836-9

10. Wu H-l, Marwah S, Wang P, Wang Q-m, Chen X-w. Misoprostol for medical treatment of missed abortion: a systematic reviewand network meta-analysis. Sci Rep. 2017;7(1):1664. doi: 10.1038/s41598-017-01892-0

11. Chu JJ, Devall AJ, Beeson LE, Hardy P, Cheed V, Sun Y, et al. Mifepristone and misoprostol versus misoprostol alone for the management of missed miscarriage (MifeMiso): a randomised, double-blind, placebo-controlled trial. Lancet. 2020;396(10253):770-778. doi: 10.1016/S0140-6736(20)31788-8

12. Jalil S, Nausheen S, Akhter AZ. Sublingual misoprostol in the management of first trimester miscarriage. Pak J Surg.2010;26(2):169-173.

13. Rizwan A, Alam K, Iftikhar T, Farooq S. Comparison of Vaginal Versus Sublingual Misoprostol in The Treatment First Trimester Missed Miscarriage. J Soc Obstet Gynaecol Pak. 2022;12(4):304-308.

14. Shah N, Azam SI, Khan NH. Sublingual versus vaginal misoprostol in the management of missed miscarriage. J Pak Med Assoc.2010;60(2):113-116.

15. Blohm F, Friden B, Milsom I, Platz-Christensen J, Nielsen S. A randomised double blind trial comparing misoprostol or placebo in the management of early miscarriage. BJOG. 2005;112(8):1090-1095. doi: 10.1111/j.1471-0528.2005. 00632.x

16. Edmonds DK. (2007). Dewhurst's Textbook of Obstetrics and Gynaecology. 7:94-99.

17. (2019). Ectopic pregnancy and miscarriage, NICE guideline. 126

18. Zhang J. (2005). A Comparison of Medical Management with Misoprostol and Surgical Management for Early Pregnancy Failure. The New England Journal of Medicine, 353(8):761-769.

19. Bennett PN, Brown MJ. (2003). Clinical Pharmacology. 629-630.

20. Craig CR, Stizel RE. (1997). Modern pharmacology with clinical applications. 716-721.

21. Nielsen S, Hahlin M, Oden A. (1996). Using a logistic model to identify women with first trimester spontaneous abortion suitable for expectant management. Br J Obstet Gynaecol, 103(12):1230-1235

22. (2014). Sri Lanka College of Obstetricians and Gynaecologists.

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