THE STUDY OF EFFICACY AND SAFETY OF EXPECTANT MANAGEMENT OF INCOMPLETE ABORTION

Sanita Kayastha, Sumina Mainali, Limu Kumari Sah

Department of Obstetrics and Gynaecology, Nepal Medical College Teaching Hospital, Attarkhel, Gokarneshwor-8, Kathmandu, Nepal,

ABSTRACT

Expectant management of incomplete abortion is a watch full waiting without intervention for certain period of time so that the retained product of conception will be expelled spontaneously. This study was carried out to see feasibility and safety of expectant management of incomplete abortion. It was observational descriptive study which was carried out in Nepal Medical College Teaching Hospital from July to December 2020 in 60 patients of spontaneous incomplete abortion. The patients which fulfill the inclusion criteria were sent home after bleeding has settled and ultrasound was carried after two weeks to see the success of the treatment. The success of the expectant management was found in 86.7%. There were heavy bleeding in 6.7% cases, unscheduled surgical evacuation was done in 13.3% cases. Blood transfusion was carried out in 5.0% of cases. The number of cases complained of severe low abdomen pain were 8.3% and limitation of activity were present in 10.0% of cases. There was one (1.7%) patient who showed the sign of genital infection. With the success of 86.7% of expectant management of incomplete abortion in our study we can consider expectant management of incomplete abortion as a safe option. However, small percentage of complications such as heavy bleeding, emergency surgical evacuation and severe pain are seen.

KEYWORDS

Expectant management, efficacy, incomplete abortion, safety

***Received on**: August 29, 2021*
***Accepted for publication**: November 11, 2021*

CORRESPONDING AUTHOR

Dr. Sanita Kayastha
Associate Professor,
Department of Obstetrics and Gynaecology,
Nepal Medical College Teaching Hospital,
Attarkhel, Gokarneswor-8, Kathmandu, Nepal,
Email: sanitakayastha@gmail.com
Orcid No: https://orcid.org/0000-0003-3243-2564
DOI: https://doi.org/10.3126/nmcj.v24i1.44140

INTRODUCTION

Spontaneous expulsion of fetus or an embryo weighing 500 gm or less at a period of amenorrhea of 20 weeks or less than that is defined as abortion.[1] When part of production of conception is retained then it is known as incomplete abortion. It is routine practice to manage incomplete abortion surgically. Up to 88% of abortion underwent surgical evacuation.[2] But surgical method is associated with haemorrhage, pelvic infection, very rarely bowel and bladder damage, broad ligament haematoma, secondary infertility, Asherman syndrome as well as anaesthetic complications.[3] The incidence of serious morbidity has been estimated to be 2.1% while the mortality is around 0.5 per 100,000 [4] with surgical evacuation.

Now days there are two other methods available to manage incomplete abortion, which are considered to be safe and effective.[5-7] They are medical and expectant management. The acceptability of medical methods is still questioned by the choice of preferred drug, optimal dosage and need for readmission due to excessive symtoms.[8,9] Expectant management is watch full waiting without intervention for certain period of time so that the retained product of conception will be expelled spontaneously. It is considered to be suitable if in anterior and posterior view of ultrasound, there are 15 to 50 mm of product of conception and if patient is haemodynamically stable.[10-12]

Wijesinghe *et al*[13] stated that expectant management up to period of two weeks obviates surgical evacuation in nearly 95% of the patients. It does not increase the risk of uterine infection and increase the chance of unscheduled surgical evacuation. Pauleta *et al*[14] found that 86.5% of cases had complete expulsion when expectant management was done of incomplete abortion and patient satisfaction was 100%. Similar findings were found by many other studies.[15,16] Incomplete abortion is one of the commonest condition for which patients are admitted in Obstetrics and Gynecology Department. If we can avoid surgical evacuation we can lessen the expenditure, hospital load, hospital stay and complications related to surgical evacuation. So this study was carried out to see feasibility and safety of expectant management of incomplete abortion.

MATERIALS AND METHODS

This study was observational descriptive study which was carried in Obstetrics and Gynaecolgy Department of Nepal Medical College Teaching Hospital. It was carried out from July to December 2020.

Inclusion criteria: Patients of spontaneous incomplete abortion, haemodynamically stable, no sign of uterine infection, of gestation till 12 weeks were included.

Exclusion criteria: Patients of incomplete abortion caused by medical abortion, with profuse bleeding, haemodynamically unstable, signs of sepsis, severe pain and fever were excluded.

Total 60 patients of incomplete abortion which fulfill the inclusion criteria were included. Detail history were taken and patient clinical characteristics such as age, parity, gestation were recorded. Then informed written consent was taken and patients were sent home after bleeding has settled. All the patients were asked to come for follow up after 2 weeks or come in between if any complications arises. After 2 weeks, all the patient underwent ultrasound to see the success of the treatment and the findings was analysed statically using SPSS v16 statistical software programme and the Chi- square test. P value= 0.05 or less was considered significant.

RESULTS

There were total 60 patients enrolled in the study. Their age ranges, parity and gestation are given in the Table 1, 2 and 3, respectively. Age range was between 18 to 40 years. 19 or less were 15%, 20-30 years were 60% and 31 years and above were 25%. As regard to parity,

Table 1: Age of the patients

Age (years)	n	%
≤ 19	9	15.0
20 – 30	36	60.0
≥ 31	15	25.0

Table 2: Parity of patients

Parity	n	%
P_1	36	60.0
P_2	16	26.7
P_3P_3 or above	8	13.3

Table 3: Gestation of patients		
Gestation (weeks)	**n**	**%**
≤ 6	20	33.3
7 – 9	16	26.7
10 – 12	24	40.0

Table 4: Outcome of expectant management of incomplete abortion and complications		
Outcomes	**n**	**%**
Success	52	86.7
Failure	8	13.3
Heavy bleeding	4	6.7
Surgical evacuation	8	13.3
Blood transfusion	3	5.0
Lower abdomen pain	5	8.3
Limitation of activity	6	10.0
Genital infection	1	1.7

primipara were 60%, parity 2 were 26.67% and parity 3 or more were 13.33%. The study was carried out between 4 - 12 weeks of gestation. There were 33.33% of cases with gestation 6 or less, 26.67% between 7-9 weeks and 40.00% between 10-12 weeks. The outcome of the study is given in table-4. During the study period, the success of the expectant management was found in 86.67% and failure was in 13.33%. There were heavy bleeding in 6.67% cases, unscheduled surgical evacuation was done in 13.33% cases. Blood transfusion was carried out in 5.00% of cases. The number of cases complained of severe low abdomen pain were 8.33% and limitation of activity were present in 10.00% of cases. There was one (1.66%) patient who showed the sign of genital infection. She was treated with intravenous antibiotics. When correlating with the age, parity and gestation with the success of the management we found that higher the gestation the success rate was higher (P value- 0.05) (Table 5).

Table 5: Correlation of age, parity and gestation with the outcome of patient				
Variable	**Category**	**Outcome**		**p-value ***
		Success	**Failure**	
Age in years	≤ 19	7 (77.8%)	2 (22.2%)	0.542
	20 – 30	31 (86.1%)	5 (13.9%)	
	≥ 31	14 (93.3%)	1 (6.7%)	
Parity	P_1	29 (80.6%)	7 (19.4%)	0.124
	P_2	15 (93.7%)	1 (6.2%)	
	$P_3 P_3$ or above	8 (100.0%)	0 (0.0%)	
Gestation in weeks	≤ 6	14 (70.0%)	6 (30.0%)	0.005
	7 – 9	14 (87.5%)	2 (12.5%)	
	10 – 12	24 (100.0%)	0 (0.0%)	

* Chi-square test

DISCUSSION

ACOG practice bulletin of 2018 has included expectant management as a reasonable first line option in all cases of miscarriages. It stated that medical management should not be routinely offered to incomplete miscarriage.[17]

When considering the success of expectant management of incomplete abortion, there was 86.7% success in our study. This finding is comparable to many studies done for similar research. In an observational study of first trimester abortion done by Luise *et al*[11] there were 91.0% success of expectant management of incomplete abortion. Sajan *et al*[18] and Pauleta *et al*[14] also found 88.5% and 82.1% success respectively in their studies. Similarly, Lemmers *et al*[19] also researched on management of incomplete abortion and they found that almost 85% of the cases had complete evacuation when expectant management was done. However, Wijesingehe *et al*[13] had comparatively higher success rate (94.4%) of expectant management of incomplete abortion.

In our study there were few complications of expectant management. We had 6.7%

of heavy bleeding, 13.3% of unscheduled surgical evacuation, 5.0% had to undergo blood transfusion. In a study done by Kushwah and Kushwah,[20] they found heavy bleeding requiring blood transfusion in 5.00 % of cases and emergency surgical evacuation in 7.00% of cases of expectant management of incomplete abortion. Wijesinghe *et al*[13] had to carry out emergency surgical evacuation in 5.6% of cases but there was no cases of blood transfusion in their study. Genital infection was found in 1.7% of case in our study. Wijesinghe *et al*[13] did not found any genital tract infection in their study. In a study done by Kushuwah *et al*[20] there were 6.0% genital tract infection. There were 8.3% of cases of severe pain and 10.0% cases with limitation of activity in our study which can be compared to the study done by Sajan *et al*[18] where severe pain was experienced by 7.7% of cases and limitation of activity in 8.0% of cases.

When correlating the gestation with the success of the treatment, we found that higher the gestation the percentage of success was higher. (p value-0.005) Fernlund *et al*[21] also found in their research that the likelihood of complete miscarriage increased with increasing gestational age according to last menstrual period, increasing crown rump length and decreasing gestation sac diameter.

With the success of 86.0% of expectant management of incomplete abortion in our study we can consider expectant management of incomplete abortion as a safe option. But it is associated with small percentage of complications such as heavy bleeding, emergency surgical evacuation, severe pain and genital tract infection. So patient selection is very important when deciding to choose for expectant management. The use of biochemical essay such as serum progesterone and Beta Human chorionic gonadotrophin (HCG) may also help us to decide in selecting the management option. Several studies reported that the lower the serum Beta HCG and serum progesterone values higher the success rate of expectant management of incomplete abortion.[22-25]

Furthermore, whenever there are more than one option for the management of any disease, patient preference is also an important factor. In a study done to find patient preferences for treatment of incomplete abortion, they found strong patient preference for expectant treatment but gave physician recommendation a significant role in the final decision. Physician need to offer both options to patient and consider individual patient preferences when making recommendations regarding the management of first trimester spontaneous abortion.[26]

Therefore, expectant management of incomplete abortion is safe management option. It would lessen the hospital burden, decrease the cost to the patient and avoid complications related to surgical and medical evacuation. It is associated small percentage of complications. Patient selection such as incomplete abortion with higher gestation should be consider for expectant management.

Conflict of interest: None

Source of research fund: None

REFERENCES

1. Alberman E. Spontaneous abortion: epidiomology. In: Stable S, Grudzinskas G, Chard T, editors. Spontaneous aborton: diagnosis and treatment. *London: Springer-Verlag*; 1992: 9-20.
2. Hemminki E. Treatment of miscarriage: current practice and rationale. *Obstet Gynaecol* 1998; 168:12-5.
3. Ratnam SS, Prasad RNV. Medical management of abnormal pregnancy. *Baillliere's Clin Obstet Gynaecol* 1990; 4: 361-74.
4. Lawson HW, Frye A, Atrash HK, Smith JC, Shulman HB, Ramick M. Abortion mortality, United States, 1972 through 1987. *Amer Obstet Gynaecol* 1994; 171: 1365-72.
5. Royal College Of Obsterics and Gynaecolgists. Management of early pregnancy loss. RCOG Green top Guidelines 25. 2006.
6. Jurkovic D, Ross JA, Nicolaides KH. Expectant management of miscarriage. *Brit J Obstet Gynaecol* 1998; 105: 670-1.
7. Ballag SA, Harris HA, Demasio K. Is curratage needed for uncomplicated incompleteabortion? *Amer J Obstet Gynaecol* 1998; 179: 1279-82.
8. Chung TK, Lee DT, Cheung LP, Haines CJ, Chang AM. Spontaneous abortion: a randomized controlled trial comparing surgical evacuation with conservative management using misoprostol. *Fertil Steril* 1999; 71: 1054-9.
9. Bagratee JS, Khullar V, Regan L, Moodly J, Kagoro H. A randomised controlled trial comparing medical and expectant management of first trimester miscarriage. *Human Reprod* 2004; 19: 266-71.

10. Sairam S, Khare M, Mhichailididis G, Thilaganathan B. The role of ultrasound in the expectant management of early pregnancy loss. *Ultrasound Obstet Gynaecol* 2001; 17: 506-9.

11. Luise C, Jermy K, May C, Costelllo G, Collins WP, Bourne TH. Outcome of expectant management of spontaneous first trimester miscarriage: observational study. *Brit Med J* 2002; 324: 873-5.

12. Sotiriadis A, Makrydimas G, Papatheodorous S, Ioannidis JP. Expectant, medical and surgical management of first trimester miscarriage: a meta-analysis. *Obstet Gynaecol* 2005; 105: 1104-13.

13. Wijesinghe PS, Padumadasa GS, Palihawadana TS, Marleen FS. Atrial of expectant management in incomplete miscarriage. *Ceylon Med J* 2011; 56: 10-13.

14. Pauleta RJ,Clode N, Gracia ML. Expectant management of incomplete abortion in the first trimester. *Federation Gynaecol Obstet* 2009; 106: 35-8.

15. Hinshaw HKS. Medical management of miscarriage. In: Grudzinskas JG, O'Brien PMS, editors. Problems in Early Pregnancy: Advances in Diagnosis and Management. London: ROCG press 1997; 284-95.

16. Trinder J, Broklehurst P, Portal R, Read M, Vyas S, Simth L. Management of miscarriage: expectant, medical and surgical? Result of randomized controlled trial (miscarriage treatment (MIST) Trial). *Brit Med J* 2006; 332: 1235-40.

17. American College of Obstetricins and Gynaecologists. ACOG practice bulletin no.200: early pregnancy loss. *Obstet Gynaecol* 2018; 132: 197-207.

18. Sajan K K R, Mumtaz P, Chandrika C, Vahab A, Sheikh Imrana H. Expectant management of incomplete miscarriage, anembryonic pregnancy and early fetal demise: a comparative study. *Int'l J Reprod Contracept Obstet Gynaecol* 2020; 9: 3144-50.

19. Lemmers M, Verschoor MAC, Rengerink KO, Naaktgeboren C, Bossuyt P, Huirne J A F *et al*. MisoREST: Surgical versus expectant management in women with an incomplete evacuation of the uterus after misoprostol treatment for miscarriage: A cohort study. *Eur J Obset Gynaecol Reprod Biology* 2017; 211: 83-9.

20. Kushwah B, Kushwah DS. A randomized controlled study on expectant management of incomplete abortions caused by self medication. *Int'l J Basic Clin Pharmacol* 2019; 8: 1409-12.

21. Fernlund A, Jokubkiene L, Sladkevicius P, Valentin L. Predictors of complete miscarriage after expectant management or misoprostol treatment of non-viable early pregnancy in women with vaginal bleeding. *Archives Gynaecol Obstet* 2020; 302: 1279-96.

22. Elson J, Tailo A, Salim R, Hillaby K, Dew T, Jurkovic D. Expectant management of miscarriage-prediction of outcome using ultrasound and novel biomarkers. *Hum Reprod* 2005; 20: 2330-3.

23. Jauniaux E, Gulbis B, Nyrhinen NC, Jurkovic D. Maternal serum marker in predicting successful outcome in expectant management of missed miscarriage. *Reprod Biomed Outline* 2017; 34: 98-103.

24. Nielsen S, Hahlin M, Oden A. Using a logistic model to identify women with first trimester spontaneous abortion suitable for expectant management. *Brit J Obstet Gynaecol* 1996; 103: 1230-5.

25. Schwarzler P, Holden D, Nielsen S, Halin M, Skladevicius P, Bourne TH. The conservative management of first trimester miscarriages and the use of colour Doppler sonography for patient selecton. *Hum Reprod* 1999; 14: 1341-5.

26. Molnar A M, Oliver LM, Geyman JP. Patient preferences for management of first trimester incomplete abortion. *J Am Board Fam Pract* 2000; 13: 333-7.