RESEARCH PAPER.

FACTORS INFLUENCING ON WOMEN'S PREFERENCE FOR ALTERNATIVE MANAGEMENT OPTIONS IN FIRST TRIMESTER MISCARRIAGE

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ABSTRACT

Miscarriage is one of the most common complications associated with early pregnancy. The optimal strategy for managing first trimester miscarriage remains uncertain. Management options for miscarriage fall into three groups medical, surgical, or expectant. Descriptive cross-sectional hospital-based study design was conducted in Teaching Hospital Jaffna. Patients managing for first trimester incomplete and missed miscarriage were considered as study population and multiple pregnancy with vanishing twin was excluded. Sample size was 497. Interviewer administered questionnaire was used as study instrument. Data analysis was facilitated by SPSS version 25.0. Ethical clearance was obtained from Ethics review committee Faculty of Medicine university of Jaffna. Majority of the study participants were above 31 years of age. (N=37;75.4%). Majority of the study participants were house wives. Study participants were not aware regarding application of their preferences while deciding on the treatment options following a miscarriage. Considerably higher number of participants had selected medical management options. Minimum preference was observed for expectant management procedures. While taking decisions relevant to miscarriages, highest influence was created by the required period of hospitalization time for treatment. Significant number of participants were affected by the ability to achieve a normal day to day life style within a minimum period of time. Deficiencies are identified relevant to knowledge and awareness regarding available treatment options and their complications following a miscarriage. Females should be educated regarding handling a miscarriage situation during the pre-pregnancy period. counselling session should be conducted regarding the available management options of miscarriages and the skills required to face the relevant challenges.

Key words: Miscarriages, Expectant, Management, Medical, surgical

INTRODUCTION

Miscarriage is one of the most common complications associated with early pregnancy. Miscarriage is defined as loss of pregnancy prior to viability. First trimester

miscarriage occurs below 12 weeks of gestation. Although miscarriage is relatively common with incidence of 10 – 20%, it can be an extremely traumatic and devastating experience [(1)].

There are different types of miscarriages. Incomplete is defined as vaginal bleeding that is – going where pregnancy tissue has already been passed but ultrasound suggests the presence of further products within uterine cavity[(2,3)]. Missed miscarriage is defined as miscarriage occurring in the absence of symptoms or minimal symptoms where the pregnancy is still visible within the uterus [(4)]. First trimester miscarriage is mostly due to chromosomal abnormalities, maternal diseases like antiphospholipid syndrome, diabetes, and thyroid disease, drugs and infections like varicella, rubella, and other viral infections [(5)].

Patient with miscarriage present with mild to severe back pain, abdominal pain, vaginal spotting, vaginal bleeding and abdominal cramps [(6)]. The optimal strategy for managing first trimester miscarriage remains uncertain. Management options for miscarriage fall into three groups medical, surgical, or expectant [(7)]. Selection of management option depends on type of miscarriage, gestation at which miscarriage is diagnosed, facilities available at individual unit, medical history of a mother and patient choice [(8)]. Up to 85% of miscarriages will resolve spontaneously within 3 weeks of diagnosis [(4)].

In expectant management patient selection and counselling are the most important factors. Earlier gestation with singleton pregnancy is most appropriate for expectant management. Patient should be anticipated regarding pain and bleeding and be given advice regarding analgesia and what to do with tissue passed. Success rate of expectant management is 75- 85% [(9)].

Traditionally, surgical evacuation of uterus was the gold standard for the management of miscarriage. The procedure can be performed under local and general anaesthesia. Cervical dilation can be assisted by cervical priming with a prostaglandin. And this reduces the pressure required to dilate the cervix during dilation and suction curettage, and reduces the risk of failure rate and uterine perforation. With this procedure is complication of infection, bleeding and uterine perforation. Significantly it more associated with blood loss[(6)].

Medical management involves using uterotonic therapy like prostaglandin E1 analogues (Misoprostol) alone or in conjugation with antiprogesterone (mifepristone). Overall success of medical management is 72 – 93% similar to expectant management [(10)]. But with medical management patient can control the events by timing medication [(11)]. Rate of infection between the three options are similar. Although these options differ significantly in process, all have been shown to be effective and accepted by patients. Patient should be counselled about risks and benefits of each of options.

Methods

A quantitative, descriptive cross-sectional hospital-based study design was applied in Gynecology wards at Teaching Hospital Jaffna. Patients managing for first trimester incomplete and missed miscarriage. Spontaneous incomplete and missed miscarriage below 12 weeks of POA and Miscarriage diagnosed by a consultant obstetrician after ultrasound scan were included. Patients with incomplete and missed miscarriage below 12 weeks who have treated in the private hospital before admission and multiple pregnancy with vanishing twin were excluded from the study.

Sample size was 497 females with history of miscarriages. A pre-tested interviewer

administered questionnaire was used as a study instrument. Questionnaire was completed by trained investigator before discharge. The questionnaire was used to gather information on procedure related factors as well as sociodemographic and economic factors influence on their choice of management. Descriptive univariate analysis was done through SPSS version25.0

Results

Study participants were not aware regarding application of their preferences while deciding on the treatment options following a miscarriage. When the opportunity of selecting a treatment method was offered, considerably higher number of participants had selected medical management options. Minimum preference was observed for expectant management procedures. While taking decisions relevant to miscarriages, highest influence was created by the required period of hospitalization time for treatment. Number of days which could bleed following the treatment procedure was the factor which demonstrated minimum influence. Significant number of participants were affected by the ability to achieve a normal day to day life style within a minimum period of time (Table 1).

Table 1: Decision making process related to the management plan for miscarriage

	Frequency (N)	**Percentage (%)**
Are you aware of that you can choose your preferable management option unless it is medical emergency		
Yes	19	3.8
No	478	96.2
Which method you choose to manage in this time		
Expectant	117	23.5
Medical	225	45.3
Surgical	155	31.2
Which factors influenced on your preference?		
Time spent at hospital receiving treatment	288	57.9
Number of days of bleeding	10	2.0
Time taken to return to normal activity after treatment	95	19.1
Chance of complications	54	10.9
Level of pain	50	10.1
Total	**497**	**100.0**

Primi gravidae mothers exhibit a reluctance to be hospitalized for necessary management of the miscarriage they experience (N =37;88.1%). All the participants who are expected to have a higher infection chance and all the participants with a higher risk of having retained products are primigravidae mothers (Table 2).

Table 2 : Association of parity of selection of expected management

	Primi Gravidae	Multigravida	Total
Important benefit in expectant management			
Avoid Hospital stay	37	5	42
Avoid Medications	-	10	10
Avoid surgeries	-	60	60
Less chance of complications	-	5	5
Risk you are bothering in expectant management			
Chance of infection	12	-	12
Prolong / heavy bleeding	15	80	95
Chance of retained products	10	-	10
Reason for avoiding medical management			
Pain	37	35	72
Heavy Bleeding	-	45	45
Reason for avoiding surgical management			
Fear of surgery & its complications	33	60	93
Heavy bleeding	4	20	24
Total	**37**	**80**	**117**

Majority of the mothers with multigravida pregnancies were worried regarding heavy bleeding. Majority of the participants who requested medical management due to pain were primi gravidae mothers. All the participants who expected medical management due to higher risk of heavy bleeding were multi gravidae mothers. Majority of the participants who demonstrated great fear for surgical complications were multi gravidae mothers (Table 2).

Table 3: Association of Age of the participants and selection of expected management

	Age<30 Years	Age>31 Years	Total
Important benefit in expectant management			
Avoid Hospital stay	32	10	42
Avoid Medications	-	10	10
Avoid surgeries	-	60	60
Less chance of complications	-	5	5
Risk you are bothering in expectant management			
Chance of infection	12	-	12
Prolong / heavy bleeding	10	85	95
Chance of retained products	10	-	10
Reason for avoiding medical management			
Pain	32	40	72
Heavy Bleeding	-	45	45
Reason for avoiding surgical management			
Fear of surgery & its complications	28	65	93
Heavy bleeding	4	20	24
Total	**32**	**85**	**117**

Majority of the participants who were reluctant to be hospitalized were young mothers. All the participants who sought expectant management in order to avoid medication, surgical interventions and surgery associated complications were mothers in older age groups. All the participants who were concerned regarding occurrence of infection and having a higher chance of developing retained products were mothers below 30 years of age. Majority of the participants who abandoned medical management due to pain were mothers in older age groups. Majority of the participants who demonstrated fear for surgeries were mothers above 30 years of age (Table 3).

Table 4: Association of employment and selection of expected management

	Housewife Self employed	Employed	Total
Important benefit in expectant management			
Avoid Hospital stay	42	-	42
Avoid Medications	10		10
Avoid surgeries	25	35	60
Less chance of complications	-	5	5
Risk you are bothering in expectant management			
Chance of infection	12	-	12
Prolong / heavy bleeding	55	40	95
Chance of retained products	10	-	10
Reason for avoiding medical management			
Pain	72	-	72
Heavy Bleeding	5	40	45
Reason for avoiding surgical management			
Fear of surgery & its complications	63	30	93
Heavy bleeding	14	40	54
Total	**77**	**70**	**141**

All the participants who sought expectant management to avoid hospitalization and medication were house wives. Majority of the participants who requested expectant management to avoid surgical procedures we employed mothers. Majority of the participants who were worried regarding the chances of getting infection and having retained products during expectant management were house wives. All the participants who avoided medical management due to pain were house wives. Majority of the participants who demonstrated fear for surgeries and surgical complications were house wives or self-employed mothers and majority of the participants who were worried of having heavy bleeding were employed mothers (Table 4).

Table 5: Association of parity of selection of medical management

	Primi Gravidae	Multi gravidae	Total
Important benefit in medical management			
Avoid Surgical Intervention	37	5	42
Opportunity to Control the event	-	10	10
Full aware of what is happening	-	60	60
Risk you are bothering in Medical management			
Chance of infection	12	-	12
Prolong / heavy bleeding	15	80	95
Pain	120	20	140
May need hospital stay	10	-	10
Reason for avoiding expectant management			
Infection	15	5	20
Heavy Bleeding		45	45
Retained products	12	8	20
Prolong time to return normality	75	80	145
Reason for avoiding surgical management			
Fear of surgery & its complications	33	60	93
Heavy bleeding	4	20	24

Majority of participants who are concerned about the possibility of opting out of surgery during medical management were primigravidae (N=37:88.1%). Primigravida mothers demonstrate a higher. Representativeness with refusing surgical interventions. And selecting medical management. All the mothers who seek medical management with the ability of completely understanding. The circumstances of management were multigravida and others. All the participants who thought that there was a higher risk of infection.

Within medical management were primary gravity mothers. Majority of the participants who thought that there was a. Possibility of occurring, prolonged bleeding tendency. Within the medical management procedure were multi gravity mothers. Participants who identified presence of a tendency of being hospitalized as a risk of medical management procedure were primary gravity mothers. Majority of the participants who? Preferred medical management due to their fear for surgeries and surgical complications. We're multi gravity mothers (Table 5).

Table 6: Association of Age of study participants with selection of medical management

	Age<30 Years	Age>31 Years	Total
Important benefit in medical management			
Avoid Surgical Intervention	15	60	75
Opportunity to Control the event	-	140	140
Full aware of what is happening	-	10	10
Risk you are bothering in Medical management			
Chance of infection	15	5	20
Prolong / heavy bleeding	-	45	45
Pain	-	140	140
May need hospital stay	-	20	2010
Reason for avoiding expectant management			
Infection	15	5	20
Heavy Bleeding	-	40	40
Retained products	--	20	20
Prolong time to return normality	-	145	145
Reason for avoiding surgical management			
Fear of surgery & its complications	15	190	205
Heavy bleeding	-	20	20

As there was a need to avoid surgical interventions. All happenings during the procedure were identified as benefits of medical management, only by participants above 31 years of age. Majority of the participants. Who thought that there was a higher risk of getting infection within the medical management procedure were more tha 31 years of age. All the participants who believed that medical management procedure was painful, and there was a tendency of developing prolonged bleeding were more than 31 years old. Majority of the participants who thought that there was a higher risk of getting infection within medical management when compared with the expectant management were primary gravity mothers. All the participants who refused expectant management, believing that a longer period of time is required to resume normal day to day. Activities were multi. Multi gravity mothers, majority of the participants who avoided surgical interventions due to their fear for occurring surgical complications were mothers more than 31 years(Table 6).

Table 7: Association of employment status of study participants with selection of medical management

	Housewife/Self Employed	Employed	Total
Important benefit in medical management			
Avoid Surgical Intervention	75	-	75
Opportunity to Control the event	110	30	140
Full aware of what is happening	-	10	10
Risk you are bothering in medical management			
Chance of infection	20	-	20
Prolong / heavy bleeding	45	-	45
Pain	125	15	140
May need hospital stay	10	20	20
Reason for avoiding expectant management			
Infection	20	-	20
Heavy Bleeding	40	-	40
Retained products	20		20
Prolong time to return normality	110	35	145
Reason for avoiding surgical management			
Fear of surgery & its complications	180	25	205
Heavy bleeding	10	10	20

All the participants who believed that avoiding a surgical intervention and having an opportunity to control the event as advantages of medical management were included into the housewife or self-employed category. All the participants who thought that there was a higher risk of getting infection and a higher tendency to occur prolonged bleeding within the medical management procedure were housewives. Majority of the participants who expressed distress regarding the pin experienced during the medical management procedure were housewives. All the females who avoided expectant management due to higher risk of infection, prolonged bleeding and having retained products and sought medical management were housewives. Majority of the females who avoided expectant management due to the longer period required to resume day to day normal life style and sought medical management were housewives (Table 7).

Table 8: Association of Parity of study participants with selection of surgical management

	Primi Gravidae	Multi gravidae	Total
Important benefit in surgical management			
Plan the event	60	5	60
Less time to return normal activity	55	35	90
Less pain	-	5	5
Risk you are bothering in surgical management			
Chance of infection	15	-	15
Prolong / heavy bleeding	35	-	35
Rare surgical complications	60	40	100
Anesthesia related complications	5	-	5
Reason for avoiding expectant management			
Infection	5	-	5
Heavy Bleeding	10	-	10
Retained products	10	-	10
Prolong time to return normality	90	40	130
Reason for avoiding medical management			
Pain	105	40	145
Heavy bleeding	10		10

Majority of the participants who selected surgical events due to possibility of planning the event properly were primi gravidae mothers. Majority of the participants who believed that ability to resume day today life style with a minimum period of time, as a benefit of surgical management were primi gravidae mothers. All the participants who were bothered of bleeding and having a higher risk of getting infection were primi gravidae mothers. Majority of the participants who avoided medical management due to severe pain were primi gravidae mothers (Table 8).

Because the opportunity can be planned well, all those who have expressed their willingness to choose surgical management are pregnant women under the age of 30. All the participants who saw the benefit of surgical intervention as a less painful condition during the surgery were all over 30 years of age. The age group below 30 years is all concerned about the increased risk of infection during the surgical procedure, the possibility of excessive bleeding and the possibility of anesthetic complications. Expectant management procedure in general, the majority of participants who think that it takes a long time to get back to normal are people under the age of 30. Most of the people who avoid medical management are people under 30 years of age because they have to face painful situations for a long time and excessively in it. All those selected for surgical management are housewives by occupation (Table 9).

Table 9: Association of age of study participants with selection of surgical management

	Age<30 Years	Age>31 Years	Total
Important benefit in surgical management			
Plan the event	60	-	60
Less time to return normal activity	40	50	90
Less pain	-	5	5
Risk you are bothering in surgical management			
Chance of infection	15	-	15
Prolong / heavy bleeding	35	-	35
Rare surgical complications	45	55	100
Anesthesia related complications	5	-	5
Reason for avoiding expectant management			
Infection	5	-	5
Heavy Bleeding	10	-	10
Retained products	10	-	10
Prolong time to return normality	75	55	130
Reason for avoiding medical management			
Pain	90	55	145
Heavy bleeding	10	-	10

DISCUSSION

Research findings indicated that there is no single best type of treatment for miscarriages. Treatment options vary depending on the cause of the miscarriage, the stage of the pregnancy, the patient's health, and the preferences of the patient and their healthcare provider[16]. Common treatment options include expectant management, medical management with medications, and surgical management. Expectant management involves allowing the miscarriage to happen naturally and can be used when the pregnancy has ended before 10 weeks[17]. Medical management involves taking medication to induce the miscarriage(18). This is often the preferred option for patients who have had a miscarriage that has lasted longer than 10 weeks[11]. Surgical management involves a minor procedure, either a dilation and curettage (D&C) or a suction curettage to remove the pregnancy tissue from the uterus. Depending on the patient's circumstances, any of these options may be appropriate [19].

Recent research has found that medical management of miscarriages is a safe and effective option for women who experience a miscarriage. Medical management involves the use of medications such as misoprostol, mifepristone or a combination of both to help the body pass the pregnancy tissue[3]. It is a safe, simple and effective treatment option for most women. Surgical management is another option for managing a miscarriage. Surgical management involves the use of a procedure called dilation and curettage (D&C) to remove the pregnancy tissue. It is usually recommended for women who have had a miscarriage in the second trimester or those who have retained products of conception after a miscarriage[12].

Finally, expectant management is a third option for miscarriage treatment. This involves monitoring the body's natural ability to pass the pregnancy tissue on its own[20]. This option is often recommended for women who have experienced a first trimester miscarriage and is usually the preferred treatment over medical or surgical management[17]. Overall, research findings suggest that each of these treatment options is safe and effective for managing a miscarriage, and that the best option for any individual woman should be based on her individual circumstances[9].

In determining the related medical treatment after a woman has had an abortion, it was identified in the study that the reluctance and fear of hospitalization is a matter of considerable attention. This is likely to become more popular if there is an opportunity to choose a method that allows treatment without hospitalization. Also, it is possible to observe a tendency of turning to medical methods that fit well with their lifestyle and do not change their lifestyle. Especially working women pay more attention to the ease of getting to work, the complications of medical treatment and other risky situations. Also, it can be observed that there is a specific fear of going to surgery because of the medical and other complications that may occur while facing the surgeries and the medical complications that may occur during the anesthesia procedures. Here, it can be seen among the study participants that the reluctance to go to hospital, the difficulties and challenges faced with it, convenience, quick reference to daily activities and the fear of going to surgery are all taken together to make a decision.

And at this time, it is shown that the study participants pay attention to the product retention and infection risks. However, it can also be observed that there is a lack of rational understanding for that. Although it appears that women pay attention to which medical method has the potential to recover quickly, the study did not reveal information about whether they have a clear understanding of it or not. When considering these situations in general, the point that appears is that women who have miscarriages do not have a good understanding of the opportunities available to them in choosing the medical management options available after miscarriages. The results of the study show that this situation needs to be adequately addressed in the antenatal and pre-pregnancy health services in Sri Lanka.

Especially in Sri Lanka's Maternal and Child Health Policy, the main thing to focus on is to take all the measures that can reduce the occurrence of maternal death during pregnancy. It is also useful to be informed about it, as well as to prepare the mother for childbirth, along with the possibility of having a miscarriage, and to provide formal knowledge about how to act after having a sudden unexpectant miscarriage. If it is possible to provide a good and clear understanding of the medical treatment related to miscarriages in antenatal clinics, it will be possible to direct women to a more efficient and effective miscarriage management process. It also provides an opportunity to reduce the health costs in the

national health system. In a time of economic understanding like this, being able to reduce the health costs of a country is a special way to improve the health system as well as to raise the economic conditions of the country.

The results of the study show that there is a situation that should be specifically considered by medical professionals, the focus of women on turning to a therapeutic method that can be handled with more ease in their work and daily household activities. It can be observed that in many cases, the medical staff decides and implements the therapeutic method based on clinical information. But here, if the patient also gets an opportunity to discuss the treatment method, the woman who has had the miscarriage will have the ability to go for the better method that suits her.

Because of this, it is possible to get some kind of relief from the physical and mental discomfort that the woman is facing at that time. Due to this, there is an opportunity to get rid of the mental stress that may occur in cases of abortion. This can be identified as a method that benefits in various ways. When referring to the medical treatment procedures related to miscarriages, how much understanding the aborted woman has regarding these medical treatment methods has a significant impact on the decisions she makes. Here we can observe that socially prevalent abortion and pregnancy health myths have a significant impact on the decision making of these women. The thing to be understood here is that although Sri Lanka is a highly literate country, there are significant deficiencies in women's updated knowledge and understanding regarding certain medical matters.

Females should be educated regarding handling a miscarriage situation during the pre-pregnancy period. To achieve this, it is more suitable to allocate a considerable period of time at the pre pregnancy sessions. It is more appropriate to offer special attention to females admitted with miscarriages and a counseling session should be conducted regarding the available management options of miscarriages and the skills required to face the relevant challenges. Health promotion activities should be planned to provide correct knowledge and awareness regarding miscarriages and its management and specially to eliminate false beliefs among females.

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