Introduction

Abortion is a reproductive health service that is part of the lives of women, couples and communities in the developed and developing countries. Globally, WHO has estimated that of the 210 million pregnancies each year, 80 million end in still birth or abortion. Of these, 42 million were estimated to be voluntarily induced abortions. India alone accounts for an estimated 6.4 million induced abortions each year. The introduction of medical abortion in 2002 and its subsequent widespread availability has also changed the abortion landscape in India. By 2002, the Drug Controller of India had approved mifepristone for use in medical termination of pregnancy up to 49 days. In 2006, misoprostol was also approved as drug of choice for various gynaecological conditions including early medical abortion.

Failure of medical abortion is a term used when a surgical curettage is performed for any reason including clinician’s decision, patient’s choice or a true drug failure. True drug failure is defined as the presence of gestational cardiac activity, two weeks following mifepristone and misoprostol administration. It occurs in < 1 % of women and pregnancy should be terminated by surgical evacuation. It is observed that failed medical abortion accounts for a large proportion of cases which undergo surgical abortion in our hospital. It is necessary to understand the factors behind this phenomenon, so that corrective measures can be put in place and access of women to safe abortions can be increased.

Abstract

Context: It is observed that a large proportion (about 40%) of the women undergoing surgical abortion in a tertiary hospital are referred due to failed medical abortion. It is necessary to understand the factors behind this phenomenon, to put corrective measures in place. Aim: Comparative study of the factors influencing successful and failed medical abortion in a tertiary care hospital in Tamil Nadu. Settings and Design: A retrospective study of 50 cases, referred as failed medical abortion, compared with a group of 67 patients who underwent successful medical abortion in Sri Ramachandra Medical College, Porur, Chennai, over a one year period. Methods and Material: The socio demographic characteristics of the two groups were compared and were studied with respect to the differences with regard to mother’s age, gestational age and number of living children to study if these factors had any impact on the failure of the abortion. Statistical analysis used: SPSS v17.

Results: The comparative study between failed and successful abortions revealed that there was no significant difference between the two groups with respect to mother’s age, number of living children and previous abortion history, though these factors have been earlier associated with success rate of medical abortions. Conclusion: The high rate of failure of medical abortions could be attributed to use of over the counter medication.

Key-words: failure of medical abortion, over- the- counter abortion kits.

Subjects and Methods

A retrospective study was carried out of the cases (n=50) referred for surgical evacuation as a result of failed medical abortion, presenting in the large tertiary hospital attached to Sri Ramachandra Medical University over a one year period from April 2014 to April 2015. The socio demographic characteristics of this group were compared with a group of patients (n=67) who underwent successful medical abortion, following national guidelines in the same hospital over a similar period from October 2013 to Feb 2015. The two groups were studied with respect to the differences with regard to mother’s age, gestational age and number of living children to study if these factors is designed to identify the factors that could influence the rate of failure such as mother’s age, gestational age at abortion, number of living children and previous history of abortion. This study also attempts to understand whether the type of provider, treatment regimen undergone and follow up treatment have an impact on the rate of failure of medical abortions.
had any impact on the failure of the abortion. The available self reported medical history was used to analyze the type of provider, type of regimen undergone and follow up treatment provided as well as the major symptoms and time of presenting at the tertiary hospital. Detailed analysis was done to understand the treatment seeking behavior of the women, their understanding and compliance of the treatment regimen and its role in causing the failure of the medical abortion.

<table>
<thead>
<tr>
<th>VISIT</th>
<th>DAY</th>
<th>DRUGS USED</th>
</tr>
</thead>
</table>
| First | One (1) | + 200 mg Mifepristone orally  
+ Anti D, if Rh negative |
| Second | Two (2) or Three (3) | For gestation up to 49 days:  
+ 400 mcg Misoprostol orally or vaginally  
For gestation up to 63 days:  
+ 800 mcg Misoprostol sublingually or vaginally  
+ Analgesics  
+ Home administration by the woman may be tried in some cases |
| Third | Fifteen (15) | + Confirm and ensure completion of procedure  
+ Contraceptives |

Table.I - Protocol for medical abortion

Activities during the third follow up visit Take clinical history and note related signs and symptoms. Pelvic examination should be carried out to ensure completion of abortion. Ultrasound should be advised if examination does not confirm the expulsion of products of conception or completion of procedure. The woman should not leave the facility without the contraceptive counselling and services. She should report back if there are no periods within 6 weeks of completion of the abortion process.

Results

1. Age

50% of the women under study belonged to the 25-29 years age bracket, followed closely by the 19-24 years group which constituted 31%. The mean ages of those who underwent a successful medical abortion were compared to those who had a failed medical abortion were similar being 26.46 years and 25.84 years respectively. (p value - 0.511) (Table II)

<table>
<thead>
<tr>
<th>Socio demographic data</th>
<th>Successful</th>
<th>Failed</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of mother</td>
<td>26.46</td>
<td>25.84</td>
<td>0.511</td>
</tr>
<tr>
<td>Gestational age at abortion</td>
<td>10.23</td>
<td>8.20</td>
<td>0.005</td>
</tr>
<tr>
<td>Number of living children</td>
<td>1.1</td>
<td>0.98</td>
<td>0.433</td>
</tr>
</tbody>
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Table.II - Comparison of means of socio demographic characteristics of women undergoing successful and failed medical abortion

2. Gestational Age at abortion

42.8 % of the women underwent the medical abortion at a gestational age of less than seven weeks, while 34.2 % underwent at the seven to nine week period. When the mean gestational age were compared, it was found to be significantly lower in the failed medical abortion group being 8.20 weeks while it was 10.23 in the successful group. (p value - 0.005) (Fig 1, Table II)

3. Number of Living children at abortion

58% of the women had one living child at the time of abortion, while the remaining were almost equally distributed between the groups having either no children or 2 children at 22% and 20% respectively. The mean number of children were comparable between the two groups being 0.98 in the failed abortion group and 1.1 for the successful group. (p value- 0.433) (Table II)

4. Previous history of abortion

Only 14% of the women who currently underwent the abortion had a previous history of abortion. 86% were undergoing abortion for the first time.

5. Time interval between abortion and admission

42.86% of the women reported to the hospital within 15 days of the abortion, while 35.71% of women reported after 15 days but before 30 days. The remaining reported after 30 days. (21.43%)

6. Symptoms at the time of admission

Bleeding was the most common presenting symptom accounting for 75.55 % of the cases, followed by
pain abdomen (13.33%). The other reported complaint was fever (4.44%) while the remaining had nonspecific complaints (6.66%).

7. Type of provider, treatment regimen undergone and follow up

A meager 18% of the women procured the medication for abortion after consulting a health care professional. The remaining vast majority, 82%, obtained the medication over the counter from pharmacy without even a proper prescription. The predominance of over-the-counter medication resulted in a lack of awareness of the proper regimen to be followed, when to report in case of emergency and the appropriate time for follow up. Only 2 patients had given history of undergoing a post abortion scan to confirm completion of procedure, the remaining were unaware of the follow up protocol.

Discussion

A meta analysis of early studies [4] has shown that the three broad classes of medical abortion regimens—Mifepristone followed by misoprostol (96%) Mifepristone followed by other prostaglandin analogues (94%) Methotrexate followed by misoprostol (94%) have comparable levels of success under 49 days gestation. Success rates show a minor decrease (and undesirable outcomes increase) for gestational ages of greater than 50 days (all three 91%). These findings are confirmed by the success rate of properly administered medical abortion in the tertiary hospital at 94%. The rate of complete abortion among women using home-based medical abortion under medical supervision has also been shown to be as high (~90%) as comparable clinic-based protocols according to studies by Ngo et al [5]. However, a recent Indian study has however, found that the need for surgical intervention in medical abortions in women who had self medicated using ‘over-the-counter’ abortion kits was as high as 75.6% [6]. When compared with a cohort of patients who underwent successful medical abortion in the hospital over a similar period, it is seen that failure of medical abortion is not associated with mother’s age, living children or previous history of abortion, though these factors have been earlier associated with success rate of medical abortions [1]. It is however shown to be negatively correlated to gestational age at abortion. The fact that the failed cases had a lower gestational age at abortion with respect to the successful cases may be due to the fact that women tend to try out over-the-counter medications (UNWANTED kit, MTP kit)(Fig 3) when they are in the early stages of pregnancy before approaching professional medical advice. This will have to be further studied. Only 18% of the patients reported having undergone the procedure under proper medical advice. This is particularly serious as only 42% of the cases in the failed abortions have been carried out within 7 weeks as laid down in the government guidelines. It is also observed that 29 cases reported with symptoms more than 15 days after the procedure had occurred, indicating that there was no proper follow up. Only two cases reported a scan having been done after the completion of the abortion process. Bleeding is the most common presenting symptom but patients seek delayed medical advice, also pointing to the fact that there was hardly any pre abortion counseling. All these findings are in line with the finding that a majority of medical abortions are being carried out without any medical supervision.

Detailed history obtained points to the fact that most patients procure the drugs for medical abortion over-the-counter from the pharmacy and had very low level of awareness of the drug regimen prescribed.

Conclusion

The reason for the high rate of failure of medical abortion in the study group could be attributed predominantly to ‘over-the-counter’ medical abortion drugs. One more important reason is that the importance of following the proper protocol is not stressed among the doctors and patients. There is also lack of proper advice regarding follow up visits and need for emergency consultation to the patient.

Recommendations

Clinicians must be taught the proper protocol for practicing medical abortion in a home or hospital setting and to emphasize the need for proper follow up. Contraception counseling should be offered to avoid unwanted pregnancy by temporary or permanent methods.
Acknowledgement

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References