Patient Preferences for Management of First-Trimester Incomplete Spontaneous Abortion

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Background: **Approximately 15% of clinically recognized pregnancies end in miscarriage. The probabilities for successful outcome between expectant treatment and dilatation and curettage for management of many first-trimester incomplete spontaneous abortions are comparable. The goal of this study was to assess patient preferences for expectant treatment compared with dilatation and curettage, and the effect of physician recommendation on these preferences.**

Methods: **During individual telephone interviews, patients were read a case scenario and two treatment options. They were educated about the estimated risks, outcomes, and costs associated with each option. The patients then verbally completed a questionnaire assessing their likelihood of choosing each option, their reasons for their choice, and the effect of physician recommendation.**

Results: **Seventy-five women between the ages of 18 and 45 years, recruited from a university-affiliated family medicine clinic, were interviewed. Of these women, 27 had experienced spontaneous abortion (cases), and 48 had not (controls). Seventy-two percent of all participants (confidence interval 0.62–0.82) were likely or highly likely to choose expectant treatment, 23% of women rated the likelihood of choosing this option unlikely or highly unlikely, and 5% were uncertain. No significant difference existed between the case and control populations regarding choice of treatment ($P = .566$). One half of the women stated they would change their choice given a physician's recommendation (55% control, 40% case, $P < .03$)**

Conclusions: **Participants indicated a strong preference for expectant treatment, but gave physician recommendation a significant role in the final decision. Physicians need to offer both options to patients and consider individual patient preferences when making recommendations regarding management of first-trimester incomplete spontaneous abortion. (J Am Board Fam Pract 2000;13:333–7.)**

Approximately one quarter of women will miscarry at some point during their reproductive years.[1] Many of these miscarriages are clinically silent. Nonetheless, approximately 15% of clinically recognized pregnancies end with embryonic or fetal death.[1]

Dilatation and curettage has been the predominant treatment for spontaneous abortion. According to a 1997 study, 92.5% of women coming to hospitals with spontaneous abortion had a dilatation and curettage, whereas 51% of women coming to outpatient family practices had a dilatation and curettage.[2] Another study in 1988 by the Ambulatory Sentinel Practice Network (ASPN) also found that of 171 spontaneous abortions, 51% were treated with dilatation and curettage in the outpatient setting.[3] Of the 143 first-trimester miscarriages reviewed by the ASPN group, 49% were treated with dilatation and curettage. Although many physicians in the family practice setting will consider expectant management to be an obvious alternative, dilatation and curettage continues to constitute at least one half of treatments used in the management of spontaneous abortion.[3]

In the past 50 years dilatation and curettage has been the recommended treatment for cases of spontaneous abortion. A 1967 issue of *GP* strongly recommended aggressive management of spontaneous incomplete abortion. The article stated that prompt curettage lessened the hospital stay and minimized such complications as blood loss and sepsis.[4] The belief in dilatation and curettage as the safest and most efficacious treatment of incomplete spontaneous abortion has persisted. In 1991, a treatment protocol published in the *American Family Physician* recommended early dilatation and curettage for inevitable and incomplete spontaneous

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abortion.[5] The obstetrics and gynecology literature has also noted the predominance of dilatation and curettage in management of incomplete spontaneous abortion.[6,7]

In recent years expectant management has been shown to be a safe alternative for uncomplicated incomplete first-trimester spontaneous abortions.[6–9] In a randomized controlled trial published in the *Lancet* in 1995, Nielsen and Hahlin[8] found comparable outcomes between dilatation and curettage and expectant management given the uncomplicated miscarriage (first trimester; stable temperature, blood pressure, and heart rate; no nausea; no excessive bleeding or pain; 15 to 50 mm of tissue in the anteroposterior diameter found by transvaginal sonography). More recently, a quantitative literature evaluation pooling 18 studies and more than 2,000 patients also found comparable probabilities for successful outcome.[9]

Patient preference studies have taken a new role in the past decade with increased interest in evidence-based medicine. One common problem with randomized controlled trials occurs when patients (or their providers) have such strong treatment preferences that they refuse randomization.[10] The loss of these patients from randomized controlled trials might lessen applicability of the results, as the subject group might only contain those who do not feel strongly about treatment.[11] Thus, this patient preference study is meant to add to the literature on management of spontaneous abortion: to complement, but not to replace randomized trials.

The goals of our study were to assess patient preference for expectant management or surgical treatment and to assess the potential effect of physician recommendation on this preference.

Methods

This study was completed through the Family Medical Center, an outpatient clinic of the University of Washington Medical Center. Human subjects approval and clinic approval were granted. We reviewed charts from a combination of patients seen on the day of review and a random sampling of charts of female patients seen within the last 2 years, evenly distributed by alphabet. Charts were of women between the ages of 18 and 45 years whose primary language was English. Cases were defined as women who had experienced miscarriage as noted in their medical charts. Controls were defined as women who had not experienced miscarriage. We chose to exclude women who had a history of non-miscarriage-related dilatation and curettage (eg, voluntary termination of pregnancy). Their experience of the dilatation and curettage would differ both emotionally and physically (the cervical os is not already dilated), which might bias choice in the study. We also excluded health care providers because of possible professional bias and our desire to assess how the lay public might approach the management of spontaneous abortion.

Two-hundred twenty-six women fit the criteria and were contacted by mail with a description of the study and consent paperwork. They were given the opportunity to decline entry in the study by return of a stamped postcard or a telephone call to a voice mailbox. Of the 189 who consented to participate, 117 were contacted by telephone. During the telephone interview with the principal investigator, consent, positive or negative history of miscarriage, and eligibility were confirmed (75 of those contacted were eligible based on above criteria), and a case scenario was described. We asked each woman to imagine herself in the following situation:

"You are in your first 3 months of a pregnancy and start to have vaginal bleeding. You go to your regular doctor, who examines you. You are found to have a normal blood pressure and pulse, no fever, no nausea, and no excess bleeding or pain. Your doctor tells you that you are having a miscarriage. The mouth of the cervix is open, and you may or may not have passed all the tissue. Your doctor orders an ultrasound and finds that tissue is present and measures less than 50 mm across, about 2 inches."

The clinical criteria in the scenario and the risks and outcomes that were described were based on those used and determined by previous quantitative literature analyses.[8,9] These analyses found that the probability of successful outcome was 93% for expectant treatment and 94% for dilatation and curettage. Successful outcome was defined as (1) all tissue passed by 2 weeks, (2) bleeding stops by 3 weeks, (3) negative pregnancy test by 4 weeks, and (4) no complications. The probabilities for successful outcome were given to the participants and the risks were described as follows:

"The risks of expectant treatment include a 7% chance of infection, excessive bleeding requiring transfusion, or failure to pass all tissue, which

would mean that you would then need a dilatation and curettage.... The risks of dilatation and curettage include a 6% chance of infection, excessive bleeding requiring transfusion, or uterine perforation (poking a hole in the uterus)."

Costs were given as follows:

"Insurance covers both treatments equally. Dilatation and curettage is the more expensive treatment assuming that both treatments are successful. If the expectant treatment is unsuccessful, however (requiring numerous office visits or possibly a dilatation and curettage), then expectant treatment becomes the more expensive option."

The woman was asked whether she would like any part of the scenario repeated or clarified, and then she was asked to answer verbally the following questions:

1. "Considering the risks, outcomes, and cost of dilatation and curettage versus expectant treatment, what is the likelihood that you would choose expectant management (rated on a 5-point Likert scale) or dilatation and curettage (rated on the same scale)?"
2. "How did you choose that likelihood?"
3. "Would you change your choice if your doctor recommended the other treatment?"

Confidence interval and chi-square analyses were used to assess the significance of the results.

Results

Seventy-five women completed the telephone questionnaires; 27 of the women had had miscarriages (cases) and 48 had not (control). The mean age of the women in the study was 31 years. Age was based on age at time of participation in the study, not age at time of miscarriage. Demographic information is shown in Table 1. Most patients were white and were highly educated.

Among the case participants in the study, 74% preferred expectant treatment, 19% preferred dilatation and curettage and 7% were uncertain. Of these participants, 37% had experienced dilatation and curettage, 44% had experienced expectant management, and 19% had experienced both. Of the women who had experienced dilatation and curettage, 40% chose expectant treatment given this scenario. Only 8% of women with a history of expectant management chose dilatation and curettage, and 80% of women who had experienced both chose expectant management rather than dilatation and curettage.

Table 1. Characteristics of Patients in the Study (n = 75).

Variable	Number	Percent
Age (years)		
18–25	20	26
26–30	19	25
31–35	12	16
36–40	12	16
41–45	12	16
Race or ethnicity		
White	62	83
Hispanic	3	4
Asian	7	9
Black	3	4
Education*		
<High-school graduate	1	1
High-school graduate	28	37
College graduate	25	33
Graduate degree	16	21

*Five participants did not answer.

Among the control population, 71% preferred expectant treatment, 25% preferred dilatation and curettage, and 4% were uncertain.

Final results are given below for both case and control participants. Overall, 72% of women (confidence interval 0.62–0.82) said that they were likely or highly likely to choose expectant treatment given the scenario and the outcomes described in the study (Figure 1). Based on chi-square analysis, no significant difference was found between the case and control populations in this choice ($P = .566$).

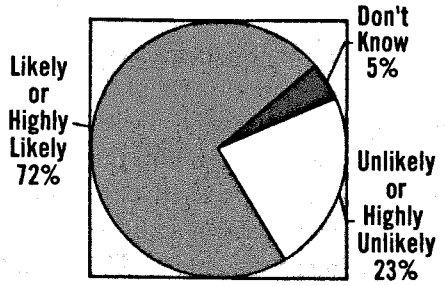

Figure 1. Overall likelihood of choosing expectant management.

When asked the reasons for the choice of management, women gave similar answers for each choice. Answers were spontaneous and unprompted. Of those who chose expectant management, reasons for choice included "natural method" (35%), "less invasive" (30%), and "let body handle it" (17%). Among the women who chose dilatation and curettage, all but 1 stated that she had chosen this option because she would want to "get it over with" (94%).

When asked to assess the effect of physician recommendation on choice of management, 50% of the participants said that they would change their choice if their physician recommended the other treatment. Slightly more women in the control group would change their choice based on physician recommendation of the alternate treatment (55% vs 40%, $P < .03$).

Discussion

In cases such as the management of spontaneous abortion, where there is more than one accepted treatment option, patient preferences become essential.[12]

When given a choice, we found that almost three-quarters of women would choose expectant management in the case of spontaneous abortion given the scenario described above. Even so, a sizable minority (almost one quarter) would choose dilatation and curettage. This finding held true both for women who had previously had a miscarriage and for those who had not. The findings of this study, combined with those of ASPN[3] and Wiebe and Janssen[2] in which roughly half of spontaneous abortions were managed with dilatation and curettage, show that given education and choice, current treatment practices do not accurately reflect patient preferences.

We found, however, that physician recommendations are taken seriously. More than one half of the control participants said that they would change their choice if a physician recommended otherwise. This number was slightly lower among the case population, possibly because they could bring their own experiences into the decision process. Even so, a sizable minority of the women who had had previous miscarriage (40%) still said that they would change their choice. The weight given to physician recommendation highlights the influence of clinician advice. One study found that 35% of women were dissatisfied with the information and advice received from their physicians during the course of their miscarriage.[13] Thus, as we examine patient preferences, we should also examine the types of information that help a patient make a decision with which she feels comfortable.

Our findings suggest that when confronted with an individual patient in the examination room, the clinician should offer complete information on both miscarriage management options. The authors recognize that many barriers exist that might prevent physicians from sharing this information, such as time, lack of physician knowledge of relative risks and outcomes, and physician comfort or custom with one management option.

The demographic characteristics of the participants in our study highlight some of the sources of bias in our study. Non-English-speaking patients and patients without telephones (who are more likely to be of lower socioeconomic level) were excluded. Our population was overwhelmingly white and educated. Thus, the preference for expectant management expressed by our study population might not represent that of other populations. Another possible source of bias could have been introduced as potential participants removed themselves from the study (30%, or 69 of 226 contacted by mail). Self-selection for participation might have created a study population of women who feel most strongly about this subject. Telephone contact also introduced some barriers into the study. Those women who could not be reached by telephone, either because of long work hours or lack of telephone access, were left out of the study population. We cannot expect that a hypothetical situation will exactly reflect how the participants would behave in the actual situation. We attempted to overcome this barrier by including women who have and have not experienced spontaneous abortion. The lack of significant difference between their choice of management suggests that the hypothetical situation might approximate reality. Finally, the greatest limitation of our study is the scenario itself. The case of the uncomplicated incomplete first-trimester spontaneous abortion excludes many patients' experience of miscarriage and narrows the window of applicability. These areas remain important for future study.

Conclusions

While treatment protocols continue to be assessed for spontaneous abortion, physicians and patients

are making choices about miscarriage management on a daily basis. This study finds that a remarkable majority of participants prefer expectant treatment but gave physician recommendation a significant role in the final decision. Clinicians need to offer both options to patients for consideration and take into account individual patient preferences when making recommendations regarding management of incomplete spontaneous abortion.

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