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Traumatic stress disorders following first-trimester spontaneous abortion

A pilot study of patient characteristics associated with these disorders

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Practice recommendations

- Provide counsel and support to women after a spontaneous abortion. Research indicates that many women will talk with their physician about their emotional distress and that physicians provide good information after the spontaneous abortion (**B**).[1,2]
- Evaluate women for acute stress disorder (ASD) after a spontaneous abortion. Research found that women reporting physical, emotional, or sexual abuse are more likely to experience ASD (**B**).[3,4]
- Patients should be assessed for post-traumatic stress disorder in follow-up visits 1 month after the initial visit (**C**).[5,6] Research has found that up to 25% of women meet criteria for PTSD 1 month post the spontaneous abortion and 7% met criteria at 4 months. Physicians should refer women who are experiencing traumatic stress to a behavioral health professional (**C**).[7]

Would you know the key symptoms or historical factors to look for in determining whether a patient will develop acute stress disorder (ASD)[5] or posttraumatic stress disorder (PTSD)?[9] Most women discharged from the hospital after spontaneous abortion consult their primary care doctor for emotional distress related to the lost pregnancy.[1] (See **TABLE 1** for diagnostic criteria.)

Some authors have projected that 10% of women who experience a spontaneous abortion meet criteria for acute stress disorder and 1% for posttraumatic stress disorder.[7] Subsequent research has indicated even higher levels of acute stress disorder and posttraumatic stress disorder.[5,6] Approximately 15% met criteria for acute stress disorder at 3 weeks,[5] 25% met criteria for posttraumatic stress disorder at 1 month, and 7% met criteria for posttraumatic stress disorder at 4 months.[6]

Our pilot study sought to validate research that found high rates of acute stress disorder and posttraumatic stress disorder in this population,[5,6] examine potential risk-factors for acute stress disorder, examine women's perception of support after their spontaneous abortion, and determine whether acute stress disorder is predictive of posttraumatic stress disorder.

We begin by sharing the take-home points of our study, and follow with the details of methods used and study results.

TABLE 1

Symptom criteria for acute and posttraumatic stress disorder[17]

Exposure to a traumatic event Response involves intense fear, helplessness, or horror
Repeatedly reexperience trauma (eg, dreams, flashbacks, thoughts)
Avoidance of trauma-related stimuli
Increased arousal (eg, hypervigilence, exaggerated startle response, irritability)
Significant impairment in important areas of functioning
Three or more dissociative symptoms (eg, derealization, depersonalization, numbing) *(for ASD only)*
Duration: 2 days–4 weeks *(for ASD),* >1 month *(for PTSD)*

FAST TRACK

28% of women met criteria for acute stress disorder soon after spontaneous abortion

Lessons from our study

Acute and posttraumatic stress disorders are common

Twenty-eight percent of women met criteria for acute stress disorder soon after spontaneous abortion, and 39% met criteria for posttraumatic stress disorder at 1 month. These findings were consistent with other research.[5,6] Moreover, women who developed acute stress disorder were significantly more likely to exhibit subsequent posttraumatic stress disorder.

Women whose acute stress disorder symptoms remain untreated following a miscarriage may maintain their symptom level or experience further exacerbation of acute stress disorder symptoms.

Predictors of acute stress disorder

In the event of a miscarriage, several characteristics may be related to later acute stress disorder (**TABLE 2**).

Half of women reporting a self-perceived medical problem (eg, collapsed gestational sac, ulcer) during pregnancy met criteria for acute stress disorder.

Echoing previous research,[2,4,8] women reporting an abuse history were more likely to experience acute stress disorder. Thus, physicians should assess for past traumatic experiences that could influence the patient's emotional response to the spontaneous abortion.

Several psychological beliefs and perceptions also were related to acute stress disorder. Women were significantly more likely to develop acute stress disorder if they felt personally responsible for the miscarriage, lacked a sense of control in their lives, or reported feeling bonded to the unborn child. However, no group differences were found for variables thought to be associated with level of bonding (eg, viewing an ultrasound of the unborn child).[9,10]

Ask your patients about support

An individual's support system may help mitigate the potentially traumatic effects of a spontaneous abortion. Most women said their spouse was the most supportive individual.

While the role of spousal support in buffering the effects of a spontaneous abortion requires further investigation, women lacking spousal support may need increased support from you and others on their health care team (**TABLE 3**).[5,7] Previous research indicated that patients who miscarried perceived 79% of nurses as supportive and 70% of the doctors as providing good information immediately following discharge from the hospital. At a 3-week follow-up, patients rated nurses at 59% and doctors at 61% in these respective areas.[2] This study found more than half the women identified physicians as supportive; therefore, medical professionals can play an important role in the patient's support system.

Moreover, providers are in a position to assess the patient's response to the spontaneous abortion, provide an appropriate intervention, and make a referral to a behavioral health professional when necessary.

Methods and Results

Methods

Participants and procedure

This study was approved by the appropriate institutional human subject review committee. Participants were recruited through the Tripler Army Medical Center Department of Obstetrics and Gynecology. Approximately 75% of participants approached agreed to participate, resulting in a sample of 25 females in the initial phase of this study (Time 1) and 19 women at Time 2.

Following a scheduled appointment with their physician (approximately 1 week post-spontaneous abortion), patients were asked by a member of the nursing staff if they would be willing to participate in the study. Confidentiality was assured to all participants and informed consent was obtained. Each participant completed a questionnaire assessing demographic characteristics and the Stanford Acute Stress Reaction Questionnaire (SASRQ).

Approximately 30 days after the initial questionnaires were administered, participants returned to clinic to complete a follow-up questionnaire assessing demographic characteristics and the Posttraumatic Stress Diagnostic Scale (PSD).

TABLE 4 summarizes demographic information. There were no notable demographic differences between the groups at Time 1 and Time 2. Due to the small sample size and to ensure satisfactory statistical power, a significance level of 0.10 was used, and all tests were one-tailed.

Measures

Demographic information. The following demographic information was obtained for each participant: age, education, marital status, employment status, and ethnicity. Additionally, participants ranked a list of individuals (eg, significant other, friend, physician) who provided them with support after their miscarriage and answered questions specifically related to the spontaneous abortion that have been examined in prior literature.[9–13]

Acute stress disorder. The Stanford Acute Stress Reaction Questionnaire (SASRQ),[2,12–14] was used to measure acute stress disorder symptoms experienced in reaction to the spontaneous abortion. Previous research has supported the reliability, validity, and internal consistency of this measure.[15]

Posttraumatic stress disorder. The Posttraumatic Stress Diagnostic Scale (PDS) scale was used to assess the presence and symptom severity of posttraumatic stress disorder. This instrument offers good content validity, as the items correspond to the 17 symptom criteria identified in the *DSM-IV*. This measure also has been shown to have good convergent validity and satisfactory internal consistency and test-retest reliability.[16]

Results

TABLE 3 lists variables related to miscarriage/pregnancy and perceived support. Seven women (28%) were identified as meeting criteria for acute stress disorder at Time 1. (**TABLE 2** shows variables' relationships to acute stress disorder.) At Time 2, 7 women (39%) met criteria for a diagnosis of postraumatic stress disorder.

Women who presented with acute stress disorder at Time 1 were significantly more likely to meet criteria for postraumatic stress disorder at Time 2. Of the 7 women who met criteria for acute stress disorder at Time 1, 4 (57%) completed follow-up assessments at Time 2. Notably, all 4 met criteria for postraumatic stress disorder at Time 2. Additionally, 3 women who did not meet criteria for an acute stress disorder diagnosis at Time 1 did meet criteria for postraumatic stress disorder at Time 2.

FAST TRACK

Half of women with a self-perceived medical problem during pregnancy met criteria for acute stress disorder

TABLE 2

Relationship of acute stress disorder and miscarriage-related variables

VARIABLE	*N*	χ^2	*U*	*P*	COHEN'S *D*
Mother's condition/self-perception					
Medical problem	24	3.60*		.03	
Feeling personally responsible	23	2.61*		.05	
Control over life	25		23.00*	.005	1.13
Mother and unborn infant					
Bonded to unborn infant	24		39.50†	.08	0.71
Image of unborn infant	25	1.19		.014	
Viewed infant after miscarriage	25	0.20		.33	
Selected name for unborn infant	25	1.47		.11	
Mother's abuse history					
Childhood physical abuse	23	4.09*		.02	
Childhood emotional abuse	23	4.09*		.02	
Childhood sexual abuse	23	1.79†		.09	
PTSD Time 2	18	8.08*		.002	

*P<.05.
† P<.10.

Limitations

This study's limitations should be considered in interpreting its results. The sample size was relatively small, so results should be interpreted with circumspection. Also, acute stress disorder and posttraumatic stress disorder diagnoses were derived from patient self-report rather than by a clinical interview. Despite these limitations, the results suggest a number of risk factors for the provider to examine with patients who have experienced a spontaneous abortion.

Future research with larger sample sizes and more diverse populations is warranted to replicate these findings. Additionally, researchers should examine a broader range of variables to determine if there are additional risk factors for developing acute stress disorder (eg, history of prior spontaneous abortions). It also will be important to develop empirically supported treatments.

It should be noted that the majority of women who miscarried did not experience traumatic stress. Researching this group of women may identify markers of resilience that lead to a positive resolution of the miscarriage, which can then guide development of prevention and treatment interventions.

FAST TRACK

Women lacking spousal support may need increased support from you and other health care team members

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TABLE 3

Variables related to pregnancy and miscarriage

	TIME 1 (N=25), TIME 2 (N=19)	
	N	%
Pregnancy		
Planned pregnancy	16	64.0
Pregnancy wanted	23	92.0
Support after miscarriage (Time 1)		
Spouse	23	92.0
Physician	14	56.0
Nurse	7	28.0
Support after miscarriage (Time 2)		
Spouse	19	100.0
Physician	11	58.0
Nurse	7	37.0

TABLE 4

Demographic characteristics of the sample

	TOTAL SAMPLE (N=25)	
	M (SD) / N	%
Age	26.2 (6.24)	
Ethnic background		
African American	3	12.0
Asian American	1	4.0
Caucasian	15	60.0
Hispanic	2	8.0
Pacific Islander	3	12.0
Other	1	4.0
Education		
High school degree/GED	17	68.0
Associate degree	7	28.0
≥ Bachelor's degree	1	4.0
Employment		
Not employed	10	40.0
Full-time employed	10	40.0
Part-time employed	1	4.0
Other	4	16.0
Marital status		
Married	24	96.0
Single	1	4.0