

Responses by Pregnant Jehovah's Witnesses on Health Care Proxies

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OBJECTIVE: To review the treatment options presented on the New York State Health Care Proxy for Jehovah's Witnesses, which is signed by pregnant women when they present for care.

METHODS: Chart reviews were performed for all women who presented to labor and delivery at our institution from 1997 to 2002 and identified themselves as Jehovah's Witnesses. A patient was included in the study if a completed health care proxy was available in her chart. Data were derived from the health care proxy and from the Mount Sinai School of Medicine's Blood Product Checklist for Jehovah's Witness Patients. Variables of interest included age, race, parity, and antenatal and perinatal complications.

RESULTS: A total of 61 patients were identified. Of these, 39.3% agreed to accept a variety of donated blood products, 9.8% would accept donated packed red blood cells, and 50.1% would accept neither from a homologous donor. With respect to nonstored autologous blood, 55% of respondents would accept either intraoperative normovolemic hemodilution or transfusion of their own blood obtained by a cell salvage system. No significant differences in responses were noted for any of the above-mentioned variables.

CONCLUSION: This review refutes the commonly held belief that all Jehovah's Witnesses refuse to accept blood or any of its products. In this population of pregnant women, the majority were willing to accept some form of blood or blood products. This information can be used to help health care providers counsel a patient when she is initially faced with considering these issues and may help to remove the stigma of accepting one of the options. (*Obstet Gynecol* 2004;104:541-4. © 2004 by The American College of Obstetricians and Gynecologists.)

LEVEL OF EVIDENCE: III

Jehovah's Witnesses compose a unique patient population that requires special consideration for medical management. This Christian sect was founded in Pennsylvania by Charles Russel in 1872.¹ Their refusal to accept blood and/or blood products, which makes them a

unique medical population, is derived from a literal interpretation of Genesis 9 and Leviticus 17, which state that one cannot eat from the bread of life.¹ This doctrine became incorporated to the Jehovah's Witness belief system after a church decision in 1945.²

For many healthy female Jehovah's Witnesses, the first time the issue of accepting blood or blood products is addressed is during their initial prenatal visit when they identify their religious beliefs on a demographics fact sheet. These beliefs are pertinent because "obstetrics is bloody business."³ A pregnant woman faces a 5% risk of sustaining a significant hemorrhage during the course of her gestation.³ Bleeding may occur antepartum, as in the case of placenta previa or abruption, or following delivery from uterine atony or genital tract lacerations. Klapholz⁴ reported a 2% transfusion rate for women who delivered at Beth Israel Hospital in 1986. Furthermore, when a Jehovah's Witness develops an obstetric hemorrhage, she has a 44-fold increased risk of dying because of her refusal to accept transfusions.⁵

Issues related to the acceptance of blood and blood products should be resolved with all patients before delivery. At the Mount Sinai Medical Center, a pregnant woman identifying herself as a Jehovah's Witness undergoes counseling by a maternal-fetal medicine specialist who explains the available options for her subsequent prenatal care. A New York State Health Care Proxy (NYHPL #2980-2994; <http://greenjournal.org/cgi/content/full/104/3/541/DC1>) and Mount Sinai Blood Product Checklist (<http://greenjournal.org/cgi/content/full/104/3/541/DC2>) are reviewed with her. These forms list various alternatives for patients requiring transfusion, including receipt of blood and blood products, in addition to other anesthetic or surgical interventions.

The counseling process can become difficult when the patient is not sure how to proceed and seeks advice from her physician. She may want to know how other Jehovah's Witnesses have reacted when faced with the same choices. A review of the MEDLINE database from January 1966 to May 2004, using the keyword "Jehovah's Witness," shows that, before this study, there was no

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information in the medical literature to address this aspect of counseling. This chart review was performed to examine the responses by Jehovah's Witnesses on their health care proxies to determine the percentage of patients who were agreeable to each of the various options.

METHODS

A chart review of all women who presented to labor and delivery at Mount Sinai School of Medicine and identified themselves as Jehovah's Witnesses between January 1, 1997, and December 31, 2002, was undertaken. The self-reporting of religion is part of the routine demographic information obtained on admission from all patients at our institution. Any woman with a completed New York State Health Care Proxy (NYSPHL #2980–2994) available in her chart was included in this study. That document, specifically designed for Jehovah's Witnesses, begins by citing the origin of their beliefs. Inquiries are then made regarding end-of-life decisions and the patient's willingness to accept blood or blood products or nonstored autologous blood. When filling out the form, the patient is asked to place her initials next to the acceptable interventions, or she has the option to check "none." In addition to this form, Mount Sinai School of Medicine has a blood product checklist for Jehovah's Witness patients that lists 6 options: whole blood, fresh frozen plasma, cryoprecipitate, albumin, isolated factor preparations, and none of the above. This form does not specifically address the acceptance of autologous blood. It also differs from the health care proxy in that "whole blood" is an option on this form, whereas it is not an option on the health care proxy. The patients sign and date both forms once they have listed their choices. Whereas the health care proxy was required for inclusion in the study and was available for all patients, the blood product checklist was not. The wishes were congruent on both forms, with the term "whole blood" only available on the Mount Sinai form.

Statistical analysis of the data from these 2 forms was performed using χ^2 test for the categorical variables to evaluate differences in responses based on patient characteristics. Variables of interest included age, race, parity, and antenatal and perinatal complications. Age and parity were also examined as categorical variables. Age categories were less than 35 and 35 years or more, and parity categories were primiparous and multiparous. The study was approved by the Mount Sinai Institutional Review Board.

RESULTS

The study population included a total of 61 patients. The patient characteristics are listed in Table 1. Pregnancy

Table 1. Patient Characteristics (n = 61*)

	n (%)
Advanced maternal age	13 (21.3)
Multiparous	34 (55.7)
Race (n = 60)	
Black	26 (43.3)
White	3 (5.0)
Hispanic	29 (48.3)
Asian	2 (3.3)
Pregnancy complications	30 (49.2)
Pregnancy-related	20 (32.8)
Maternal medical condition	10 (16.4)
Intra- and postpartum complications (n = 58)	7 (12.1)

* Except where otherwise indicated.

complications included pre-existing maternal medical conditions, such as asthma, chronic hypertension, and sickle cell disease, medical conditions presenting in pregnancy, like pyelonephritis and appendicitis, and medical complications of pregnancy, such as preeclampsia, preterm premature rupture of membranes, and gestational diabetes. Of 61 patients, 32.8% had one or more pregnancy-related complications, whereas 16.4% had a pre-existing maternal medical condition. Intrapartum and postpartum complications, such as postpartum hemorrhage, chorioamnionitis, and endomyometritis were experienced by 12.1% of the patients.

With respect to donated blood or blood products, there were 3 options: whole blood, some amount of blood products, or no blood (or blood products). Whole blood was accepted by 9.8% of respondents, 39.3% agreed to accept some blood products, and 50.1% would not accept either blood or blood products. With respect to autologous (one's own) blood, there were 2 options: hemodilution and intra- or postoperative cell salvage. Of these options, 55% would accept intraoperative hemodilution, and 46% would accept the use of a cell salvage system. Of the patients who refused donated packed red

Table 2. Comparison of Patients Accepting or Declining Blood Products

	Accepted blood products	Did not accept blood products	P
Age < 35 y (%)	80.0	77.4	.81
Nulliparous (%)	43.3	45.2	.89
Race (N)	30	30	.30
Black (n)	15	11	
White (n)	0	3	
Hispanic (n)	14	15	
Asian (n)	1	1	
Pregnancy complications (%)	45.2	53.3	.52
Perinatal complications (%)	6.7	17.9	.19



blood cells, 43.6% would accept some autologous blood products ($P = .009$, 95% confidence interval of the difference 0.27–0.52). No significant differences in responses were noted for any of the above-mentioned variables (Table 2).

The sample size ($n = 61$) is small. The maximum margin of error corresponding to this sample size is $\pm 12.6\%$ at 95% confidence intervals. This basically means that, 95% of the time, the same results would be obtained within 12.6%.

DISCUSSION

The refusal of Jehovah's Witnesses to accept blood or blood products stems from their interpretation of the previously mentioned Old Testament passages from the Christian Bible. Their tradition teaches that receiving blood products may lead to excommunication and eternal damnation, and an individual who offers to transfuse blood is considered by many members of the sect to be acting under the devil's influence.⁶ It is with this background that a pregnant Jehovah's Witness initially approaches a health care proxy.

Obstetric hemorrhage is not infrequent. Approximately 2% of women who present to a labor and delivery floor will require a blood transfusion,⁴ and as previously stated, this can lead to a 44-fold increased risk of maternal mortality if the patient refuses all transfusion therapy.⁵ For many young female Jehovah's Witnesses, filling out the health care proxy is the first time they have been directly confronted with the necessity to make a personal commitment to their religious beliefs.

The New York State Health Care Proxy is specific to Jehovah's Witnesses. It begins by stating that, as a member of that sect, the person signing the form refuses all homologous or stored autologous blood. The form then lists several blood fractions and gives the Jehovah's Witness the option to accept all, some, or none of those products. These include albumin, erythropoietin, synthesized clotting factors, and Rh immune globulin (RhoGAM, Ortho-Clinical Diagnostics, Inc, Raritan, NJ). With respect to nonstored autologous blood, the patient has the option of accepting hemodilution, intraoperative or postoperative salvage of her own blood, or none of the above. Normovolemic hemodilution, a technique performed by an anesthesiologist, involves removing a quantity of the patient's whole blood in the immediate preoperative period, and replacing it with crystalloid or colloid solutions.⁷ When this technique is used, the blood lost during the operative case is low in red cells, and because the oxygen dissociation curve is shifted to the right, the oxygen-carrying capacity is optimized. At the end of the case, the previously removed

autologous blood is returned to the patient.⁷ The form concludes by discussing end-of-life issues and enables the patient to record any other instructions she may want to convey. At Mount Sinai School of Medicine, an additional checklist was used during the years covered in this review. The difference between this list and the New York State Health Care Proxy is that donated "whole blood" is an option on the Mount Sinai form, whereas it is not an option on the state's health care proxy.

A patient's decision about how to respond to the questions asked on these forms is very personal. They often look to their church leaders, family members, and health care providers for guidance. On some occasions the pregnant woman's belief system may be different from that of her family members, which is why she should be allowed to make these decisions on her own, in the absence of outside influences.

No blood transfusions occurred in this series of patients. Of those patients with pregnancy complications, 5 had bleeding complications, including 2 postpartum hemorrhages, 1 placenta previa with bleeding, 1 retained placenta with the loss of 500 mL of blood, and 1 placenta accreta. Interestingly, all of these patients refused blood or blood products. The patient with placenta accreta had a history of a vaginal birth after cesarean delivery (VBAC). She attempted a second VBAC in the current pregnancy, but suffered a postpartum hemorrhage so severe that she underwent an exploratory laparotomy with hysterectomy to control the hemorrhage. During the surgery she entered into disseminated intravascular coagulation, and her status deteriorated quickly. She died on the operating table. Her family members could not agree on whether or not to give her blood products, but it may not have made a difference because of her sudden deterioration. Anecdotally, there are certainly instances in which patients have changed their minds in the absence of outside influences or once bleeding complications have occurred; however, that was not the case in this series.

When a physician counsels a Jehovah's Witness, there are several ethical and medicolegal considerations that should be explored.⁶ This review demonstrates that this is the first query of its kind to look at what the actual responses of pregnant Jehovah's Witnesses have been when faced with the realization that they will have with a 2% risk of requiring transfusion. The knowledge that about 50% of patients in this series agreed to accept blood or some blood products may be of value to physicians in counseling other women who will soon undergo labor and delivery and may assist those patients in making their decisions. This review is not meant to coerce any patient's decision, but it may help put some women at ease when they feel that they are deviating



from their belief system. Such a patient is not alone in this circumstance, and that knowledge may make the difference between life and death when an unexpected hemorrhage occurs.

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