

JEHOVAH'S WITNESSES' POSITIONS ON THE USE OF HEMOCOMPONENTS AND HEMODERIVATIVES

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ABSTRACT

OBJECTIVE. To study the extent of Jehovah's Witnesses' knowledge and acceptance of hemocomponents and hemoderivatives, both fresh and stored, and also to propose a bioethical framework to resolve any ethical and moral conflicts identified in their relationships with physicians and dentists.

METHODS. A questionnaire was used to interview 150 Jehovah's Witnesses who attend "Kingdom Halls" in the Distrito Federal, Brazil. The questionnaire collected information on socio-demographic data and the use (or not) of hemocomponents and hemoderivatives by those interviewed and also the approach of healthcare professionals to patients of this religion.

RESULTS. 74% believe that the use of blood causes more harm than benefits to health - refusal is essentially based on the Bible; 96% do not accept hemocomponents, but 76% accept hemoderivatives in specific situations, showing that differing personal interpretations exist; 80% feel would morally offended by the use of stored blood and only 45% by use of fresh blood, confirming the religious interpretation that fresh products are in general more acceptable; according to 83% of the interviewees dentists do not ask about patients' religion, and 71% of physicians do not ask, showing little professional concern with the issue.

CONCLUSION. Jehovah's Witnesses are seen by their "moral strangers" (here physicians and dentists) as the religious group that simply "does not use blood". Although, several blood treatments are nowadays permitted, this does not deprive individuals of the right to refuse blood treatments on free conviction. Personal interpretations frequently increase the list of blood prohibitions and, consequently, the number of moral conflicts, when considering that physicians and dentists usually do not ask about a patient's religion.

KEY WORDS: Jehovah's Witnesses. Blood component transfusion. Blood substitutes. Bioethics. Personal autonomy. Professional autonomy.

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INTRODUCTION

The ethical, moral and legal transformations linked to the technical and scientific progress that has taken place over recent years have given rise to new situations in healthcare practices, modifying the relationship between professionals and their patients, with focus shifting from moral duties and obligations (deontology) towards respect for autonomy and moral pluralism (bioethics).^{1,2,3,4}

The healthcare professional-patient relationship is asymmetrical and vertical by nature. These characteristics are accentuated when it is the professional who unilaterally defines the therapeutic decisions to be taken. In such cases professionals are putting excessive weight on the ideal of beneficence, which, in practice, leads to them taking a paternalistic position, taking decisions on behalf of others. The limit of beneficence is autonomy.⁵

Sometimes, new techniques that could offer benefits from a therapeutic point of view are confronted with issues of a moral, ethical and/or religious nature. One of these new situations of ethical and moral conflict in healthcare is the application of new treatments using hemocomponents and hemoderivatives to patients who are Jehovah's Witnesses.

Nowadays, hemocomponents and hemoderivatives play an important role in blood-based treatment and are widely used in medicine and dentistry. These biomaterials have made it possible to create and extend a large number of different techniques and improve comfort, accelerating and improving healing after surgery.^{6,7}

The process of regeneration (the formation of tissues that are functionally and morphologically restored, with the same properties and structure as the tissues that have been lost)

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tends to be naturally substituted by repair, with distinctly inferior density and qualities.⁸ Certain factors must be present for tissue regeneration to be achieved during healing: good quality donor tissue, vascularization of the host area, immobilization of the graft and efficient repair mechanisms. Only the last of these is exclusively independent of the surgical technique employed and can be improved by using blood-based biomaterials.^{6,9}

Blood treatments that can aid with this and other physiological processes and which are also of particular relevance to the issue of utilization with patients who are Jehovah's Witnesses include: whole blood (transfusion), hemocomponents (plasma, red blood cells, platelets, platelet rich plasma and platelet gel), hemoderivatives (fibrin glue, sera, vaccines, plasma expanders and coagulation factors) and others (cell saver, hemodialysis, extracorporeal circulation, cell-free oxygen carriers and acute [iso]normovolemic hemodilution).

Brazil is a secular country and freedom of religious pluralism is guaranteed by the constitution.¹⁰ Furthermore, according to data from 2009, with more than 700 thousand Jehovah's Witnesses, it has the second largest population of any country in absolute terms.¹¹ Despite the size of this population and the constitutional guarantees, conflicts continue to arise during medical and dental treatment. Not even the fact that the crime of illegal constraint (article 146, § 3º, I of the Brazilian Penal Code) exists for physicians or dentists who oblige a patient who is a Jehovah's witness and who is conscious and capable to receive blood, prevents their autonomy from being disrespected.^{10,12}

The person responsible for prohibiting Jehovah's Witnesses from receiving blood transfusions, vaccines and organ transplantations was Nathan Homer Knorr. According to *The Watchtower* published on 1st December of 1944, the prohibition against eating blood that is found in the Bible should be extended to medical treatments.¹³ In 1945, the prohibition was extended to include the blood of animals, organ and tissue transplants and vaccines.^{13,14}

These fundamentals are considered to be prescribed in several different passages of the Bible, which, although not expressly written in technical terms, are interpreted as prohibiting the use of blood in the biomedical sphere.^{3,4} Some of the passages referring to abstinence from blood, the search for good health and blood as beings' souls include: Genesis 9: 3, 4, 5 and 6; Leviticus 17: 10, 11, 12, 13 and 14; Acts of the Apostles 15: 20, 28 and 29; Deuteronomy 12: 23, 24 and 25; 1 and Samuel 14: 32, 33 and 34.^{15,16,17}

However, the interpretation of blood-based treatments from the perspective of the religion has changed over time, since new techniques have been developed and new interpretations have emerged. On the other hand, there is no restriction on individual Jehovah's witnesses following their own interpretations of the matter, which extends the list of prohibitions.^{13,16}

In general, Jehovah's Witnesses nowadays accept a range of treatments involving blood. However, many physicians and dentists are either unaware of this fact or simply do not know

Chart 1 – Blood treatments and their potential acceptance by Jehovah's Witnesses - source: the authors		
	TYPES OF BLOOD TREATMENT	POSITION OF JEHOVAH'S WITNESSES
TOTAL	Total fresh heterologous blood transfusion	Do not accept
	Total stored heterologous blood transfusion	Do not accept
	Total fresh autologous blood transfusion	Accept
	Total stored autologous blood transfusion	Do not accept
HEMOCOMPONENTS	Fresh heterologous platelet gel	Do not accept
	Stored heterologous platelet gel	Do not accept
	Fresh autologous platelet gel	Accept
	Stored autologous platelet gel	Do not accept
	Heterologous fresh plasma	Do not accept
	Heterologous stored plasma	Do not accept
	Autologous fresh plasma	Accept
	Autologous stored plasma	Do not accept
	Fresh heterologous platelets	Do not accept
	Stored heterologous platelets	Do not accept
	Fresh autologous platelets	Accept
	Stored autologous platelets	Do not accept
	Fresh heterologous platelet-rich plasma	Do not accept
	Stored heterologous platelet-rich plasma	Do not accept
	Fresh autologous platelet-rich plasma	Accept
	Stored autologous platelet-rich plasma	Do not accept
HEMODERIVATIVES	Fibrin glue of whatever origin	Accept
	Sera	Accept
	Vaccines	Accept
	Crystalloid plasma volume expanders	Accept
	Colloid plasma volume expanders(except plasma and whole blood)	Accept
	Acute (iso)normovolemic hemodilution	Accept
	Coagulation factor VII of any origin	Accept
OTHERS	Intraoperative cell salvage	Accept
	Hemodialysis	Accept
	Extracorporeal circulation	Accept
	HbOCs in general	Accept

HbOCs = Hemoglobin-based oxygen carriers free of cells

that their patient is a Jehovah's witness, since they do not tend to ask the question when taking a patient's history, which in itself creates an *a priori* concrete problem with relation to respect for these patients' autonomy.^{13,16,17}

As a general rule, xenogenic blood products are not acceptable and allogeneic use is with reservations. Whole blood and hemocomponents (leukocytes, erythrocytes, plasma or platelets) stored and/or heterologous (from another person), are not accepted. There is no prohibition whatsoever on hemoderivatives (minor fractions), because they are not considered blood (soul) by the religion's doctrine. Other treatments with fresh autologous material (such as extracorporeal circulation, cell salvage, hemodialysis and platelet-rich plasma) are generally accepted.¹⁶ See Chart 1 for more details.

This combination of different interpretations and lack of knowledge or interest on the part of health professionals means that, according to Engelhardt, in the eyes of "moral strangers" (physicians and dentists who are not witnesses) they are simply religious people who "do not accept blood", which makes this a fertile field for conflicts.^{18,19}

The general objective of this study was to investigate the position of Jehovah's Witnesses in Brazil's *Distrito Federal* with regard to the use of treatment with fresh and stored hemoderivatives and hemocomponents. Specific objectives were to study the degree of knowledge about and acceptance of these treatments by Jehovah's Witnesses; to analyze the sociocultural profile of those investigated; to identify whether health professionals concern themselves with the religion of their patients when taking histories; and to propose a bioethical framework for solving any conflicts that are encountered.

METHODS

This was a cross-sectional, qualitative, descriptive study. The sample was a random sample of convenience of 150 practicing Jehovah's Witnesses from the Distrito Federal in Brazil. There were no personal restrictions on who could participate, with the exception of the demand that minors be helped/represented by their guardians. The exclusion criteria were illiteracy and refusal to take part.

The Jehovah's Witnesses Hospital Liaison Committee (HLC) authorized the research, contacted the participants, provided information and helped in the distribution of questionnaires. Its participation was essential, bearing in mind the strictures of Ministry of Health Resolution 196/1996 and the difficulties involved in contacting subjects in isolation.

The questionnaires were distributed at Kingdom Halls (places where Jehovah's Witnesses meet to profess their faith) serving the following neighborhoods in the Distrito Federal: Cruzeiro Novo, Cruzeiro Velho, Setor Octogonal, Setor Sudoeste, Setor de Mansões Park Way, Águas Claras and Taguatinga.

The questionnaire was composed of closed questions and was divided into two parts: part I (general information) contained three questions on the age, sex and educational level of the

respondent; and part II (specific questionnaire) with six questions designed to meet the study objectives. Two copies of an Informed Consent Form (ICF) were provided together with a sheet of paper explaining the research. All 150 of the questionnaires were returned duly completed.

The study methodology complies with the ethical principles for research with human beings laid out in Ministry of Health Resolution 196/1996 and was approved in advance by the Research Ethics Committee at the Health Sciences Faculty of the *Universidade de Brasília*, protocol number 070/2009. Data were computed using simple percentages, discarding decimal places, and Microsoft Excel® was used to tabulate and cross-reference data and to represent them graphically.

RESULTS

The answers to the first question in part I of the questionnaire (general information), about the age of respondents, were as follows: a) 28% were up to 30 years old (42 respondents); b) 25% were 31 to 40 (38 respondents); c) 26% were 41 to 50 (39 respondents); d) 14% were 51 to 60 (21 respondents); e) and 7% were more than 60 years old (10 respondents).

The answers to the second question, on sex, were as follows: a) 39% male (59 respondents); b) 60% female (90 respondents); c) <1% did not answer (1 respondent).

The answers given to the third question, on educational level, were as follows: a) 5% had started but not graduated primary education (7 respondents); b) 2% had graduated primary education (4 respondents); c) 11% had started but not graduated secondary education (17 respondents); d) 33% had graduated secondary education (49 respondents); e) 13% had started but not graduated further education (20 respondents); f) 23% had graduated further education (34 respondents); g) 13% had finished a postgraduate qualification (19 respondents).

The answers to the first question in part II of the questionnaire (specific questionnaire), - *Has your doctor ever asked you what your religion is?*, were as follows: a) 28% has asked (42 respondents); b) 71% never asked (107 respondents); c) <1% did not answer (1 respondent).

The answers to the second question in part II, - *Has your dentist ever asked you what your religion is?* were as follows: a) 17% has asked (25 respondents); b) 83% never asked (125 respondents).

The third question was, *Do you think that medical and/or dental treatments that use all four hemocomponents of blood (red cells + white cells + platelets + plasma) to reduce the risk of death or to improve healing after surgery are beneficial or harmful to people's physical health?*, and the answers were as follows: a) <1% beneficial (1 respondent); b) 74% harmful (110 respondents); c) 13% they are the same as any other treatment – involving both benefit and harm (20 respondents); d) 9% I don't know what these treatments are (13 respondents); e) 4% did not answer (6 respondents). Even though there was no space provided to do so, some respondents added comments,

as follows: a) *none of the above because each procedure should be analyzed in depth* (1 person); b) *the results are irrelevant to Witnesses' position on the subject* (2 people); c) *I reject these treatments* (1 person); d) *I need information on each procedure* (1 person).

The fourth question was, *Would you accept a medical and/or dental treatment that employed just one of the four hemocomponents alone (red cells or white cells or platelets or plasma)?*, were as follows: a) <1% I would always accept it (1 respondent); b) 2% only if it was truly essential to improve recovery and/or results (3 respondents); c) 1% only in cases where there is a risk of death (2 respondents); d) 96% I would never accept (144 respondents).

The answers to the fifth question, *The hemocomponents described above can be divided into even smaller pieces, called hemoderivatives (example: albumin, fibrinogen, immunoglobulins and coagulation factors). Would you accept a medical and/or dental treatment that used just these "hemoderivatives" in your body?*, were as follows: a) 8% would always accept (12 respondents); b) 51% if it was truly essential to improve recovery and/or results (77 respondents); c) 17% only in cases where there is a risk of death (25 respondents); d) 23% would never accept (35 respondents); e) <1% did not answer (1 respondent).

The sixth question was, *Would you feel morally offended if a doctor or dentist who was treating you with your permission carried out a treatment using 'hemocomponents and/or hemoderivatives from blood that was NOT FRESH' without informing you of this fact?*, were as follows: a) 1% I would not be offended because I accept these treatments (2 respondents); b) 8% I would only be offended if it was hemocomponents that were not fresh (12 respondents); c) <1% I would only be offended if it was with hemoderivatives that were not fresh (1 respondent); d) 80% any treatment with blood that was not fresh would offend me (120 respondents); e) 10% did not answer (15 respondents). Even though there was no space provided to do so, some respondents added comments, as follows: a) *I would only be offended because I had not been told* (1 person); b) *I would be offended by any treatment* (1 person); c) *Despite having given authorization, I must be told about every procedure* (4 people).

The seventh question in part II of the questionnaire, was *Would you feel morally offended if a doctor or dentist who was treating you with your permission carried out a treatment involving interoperative use of FRESH material derived from your own blood (example: acute normovolemic hemodilution, extracorporeal circulation, intraoperative cell salvage, hemodialysis, platelet-rich plasma) without informing you of this fact?* and the answers were as follows: a) 3% I would not be offended because I accept any treatment using fresh blood (4 respondents); b) 8% I would only be offended if it was hemocomponents that were fresh (12 respondents); c) 0% I would only be offended if it was with hemoderivatives that were fresh (0 respondents); d) 45% any treatment using fresh blood would offend me (68 respondents); e) 44% did not answer (66 respondents). Even

though there was no space provided to do so, some respondents explained their answers as follows: a) *Especially because I was not told* (4 people); b) *The doctor or healthcare professional should explain everything to me in advance (treatments, procedures, etc.). In the case of emergencies or unconsciousness, I have a formal document registered with a notary detailing what I accept and what I reject* (1 person); c) *I would be offended by any treatment* (1 person); d) *Only if I was not told, because I accept some treatments that use my own blood* (1 person); e) *I must be informed of every procedure* (14 people); e f) *Ethics demand that I be informed before every procedure* (7 people).

Cross-referencing the sociodemographic results with the blood-specific results did not reveal any statistically relevant features.

DISCUSSION

A well-taken patient history can avoid clinical, ethical and legal complications, in addition to allowing dialogue between people with discrepant relationships and strengthening patient autonomy. This is the first contact between the professional and the patient and should be used to obtain the information required to provide integral care, not merely clinical care. In this context, it can provide better information with relation to possibly using blood components, since it helps with correct therapeutic planning, which is of particular relevance for Jehovah's Witnesses.²⁰

However, despite this, for the sample on which this study is based, just 28% of physicians and just 17% of dentists asked their patients what their religion was during clinical care. This conduct is not in compliance with the legislation of Brazil, which is where this research was conducted and which is a country that is constitutionally secular and religiously pluralist.¹⁰

All of this shows that ethical advances in the professional biomedical field have not kept pace with technical and scientific development, since concern with clinical status and with offering the best and most modern treatments remains the unilateral focus of care, irrespective of the personal moral choices of these patients.^{1,5}

Some of the respondents mentioned that it would be an "ethical failing" on the part of a professional who did not explain every procedure. Ethical conflicts are more common between people who are what Engelhardt describes as "moral strangers",¹⁸ i.e. people who do not share the same morality and need dialogue to reach possible agreements.²¹ This is exactly what happens between patients who are Jehovah's Witnesses and health professionals who are not, since, in the view of their "moral strangers", these patients are simply religious people who "do not accept blood" – which is not in line with the true situation.¹⁸

The majority of respondents (74%) believe that blood treatments cause more harm than benefit to health. Indeed, the scientific literature does describe countless undesirable reactions to the use of blood.²² The doctrine of the Witnesses and of the Bible itself is the same, since they hold that good health is related to abstention from using blood (Acts of the Apostles

15: 29).¹⁵ Therefore, to adherents of this doctrine, using blood is not only an offense to their beliefs and interpretation of the Bible (fundamental principal), but also denies them the right to choose a treatment that is healthier from their point of view.²³

In general, Jehovah's Witnesses do accept medical and dental treatments, including some that employ blood. However, the rule is to reject blood. The religion allows for personal interpretations and these primarily take the form of rejecting more than is explicitly prohibited, since there are Witnesses who believe that even hemoderivatives are blood (soul), and do not accept "anything" that is in any way related to blood.^{3,16}

Hemocomponents are the least accepted (less than 4% would use them), since this biomaterial is rejected by the religious doctrine as though it were whole blood, i.e., it can only be used if it is both homologous and fresh. With regard to hemoderivatives, the Jehovah's Witnesses' dogma does not define them as blood, because they are extremely small fractions of the tissue. Nevertheless, although the doctrine permits their use, only 8% of respondents would accept them unreservedly, whereas 68% would only accept them in specific clinical situations (if it was truly essential to improve recovery and/or results - 51% and only in cases where there is a risk of death - 17%). A further 35 respondents (23% of the sample), in turn, replied that they would never use them. While this does not contradict the doctrinal guidance that these fractions are not blood, the significant level of refusal is notable.

In answer to question 7, where they were asked whether they would feel offended if a trusted clinician used a treatment involving interoperative use of fresh material originating from their own blood without informing them (acute normovolemic hemodilution, extracorporeal circulation, intraoperative cell salvage, hemodialysis, platelet-rich plasma), while there were no negative responses with relation to using these hemoderivatives, 43% did not respond at all, demonstrating a certain degree a lack of awareness specifically of this subject.

There is one correlation between the blood questions and the sociocultural data which is worthy of mention: respondents with higher educational level were more likely to believe in the harmful results of treatments with blood. It was also this group that were most averse to hemocomponents and least averse to hemoderivatives. It is possible that educational level, which is directly related to access to scientific literature, may be related to this stance.

It should be pointed out that, despite the variations in interpretation identified in this study, the Jehovah's Witnesses are a single community. For them, sharing a common morality does not mean they must always agree on everything: these small differences do not prevent them from cooperating or from recognizing themselves as moral friends, without losing the unity that their religion offers.^{16,18} The fact that 80% of the sample would be offended by treatments using stored blood, although only 45% would feel offended by fresh blood treatments, can once more be explained within the same context, even though treatments with

fresh blood components tend to be more acceptable.¹⁶

Removing blood from the body for just a short while, without resorting to storage, does not prevent that blood being re-administered to the same person, even in the form of whole blood^{3,16} - a possibility that many respondents appeared to be unaware of - which demonstrates the relative acceptance of blood by Witnesses. If these details were better publicized among health professionals many legal, ethical and moral conflicts would undoubtedly be avoided. There are nowadays many different treatments that employ this technique instead of traditional transfusions of whole stored heterologous blood.

CONCLUSIONS

The Bible is the primary doctrinal source for Jehovah's Witnesses' refusal of blood. The most common justifications for refusal are a desire for good health and the fact that blood represents people's souls, in addition to the fact they also believe that blood can be harmful to health.

Fresh hemoderivatives are most accepted. Xenogenic blood is the only type that is totally refused. However, in the case of allogeneic blood, there are many doctrinal intricacies and personal interpretations that make it difficult for health professionals to be sure about acceptance and which, as a consequence, provoke legal, ethical and moral conflicts.

The doctrine treats hemocomponents as though they were whole blood. In contrast, hemoderivatives are not considered to be blood and can be accepted, even xenogenic hemoderivatives. Notwithstanding, the results of the study show that not all Jehovah's Witnesses agreed with this doctrinal interpretation, whether because of lack of specific information or personal choice, since the religious recommendation is not obligatory on this point.

In general, when the followers of this doctrine exhibited personal interpretations, which are allowed, these prohibited more than the religion already does. These discrepancies, however, do not interfere with the finding of a common morality and recognition of a moral community even a homogenous community, encompassing true "moral friends", who diverge only on certain specific points.

Health professionals who deal directly with patients, represented in the study by doctors and dentists, still maintain a unilateral focus on caring for the clinical condition of these patients, forgetting to see them as autonomous moral beings with the right to make their own decisions. These patients' religion is part of this bioethical context and has a direct influence on their treatment choices, and on the expression of their autonomy. Therefore, asking about patients' religion when taking their medical histories could avoid legal, ethical and moral conflicts, and help to protect the autonomy and rights of patients who are Jehovah's Witnesses.

In order to provide adequate healthcare to patients who are Jehovah's Witnesses, professionals must be more than just ethically prepared, they must be bioethically prepared. Only then will

they be able to identify the ethical and/or moral conflicts in the relationship and act positively (providing information and obtaining free and informed consent) and/or negatively (not coercing to accept/not abandon treatments, even in order to save lives) in order to protect the autonomy and other civil rights of patients who are Jehovah's Witnesses.

Religion does not exclude autonomous action. The fact that the person is a Jehovah's Witness and rejects blood treatments does not mean there is a lack of autonomy. The rejection of blood on the part of a Jehovah's Witness, is in fact a manifestation of a particular point of view (blood is the soul) which coincides with a previous manifestation of autonomy (at the time of choosing the religion). Merely sharing ideas with a religious doctrine cannot be considered a form of moral coercion.

The influence of Catholicism on our culture, which is manifest to a certain extent in the preference for the principle of beneficence in ethical and/or moral discussions, is latent in the interpretation of our legislation. This being the case, even when Jehovah's Witnesses' decisions are truly autonomous, they are not respected in cases where life is at risk, which shows that in our society there is an implicit hierarchy of principles with the principle of beneficence and the right to life being overvalued as a rule.

With relation to the bioethical principle of beneficence, it is important to emphasize that it directs the professional to seek the patient's good and not that which is believed to be for their good. In this specific case, it should be considered that, to physicians and dentists, the "best treatment" is the most effective one. However, for patients who are Jehovah's Witnesses, it would be the treatment that also respects the dictates of their conscience.

Physicians and dentists must have respect for the autonomy of their patients who are Jehovah's Witnesses. However, this will only be possible if the professionals themselves are autonomous with respect to the State. In Brazil, this does not happen, because if professionals do respect patient decisions and as a result the patient suffers injury or death, the professional will be accused of the crime corresponding to that outcome.

The relationship between physicians and dentists and Jehovah's Witnesses is complex, involving many different clinical, technical, social, personal, legal, religious and bioethical factors, including moral pluralism, autonomy, paternalism and the problems that judicialization of health brings. Therefore, nowadays healthcare free from ethical and/or moral conflicts demands more than just "goodwill" on the part of professionals, it also demands an integrated perspective on the object of care (the patient) and bioethical training for professionals.

Conflict of interest: none

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