



ELDERLY PATIENTS WITH SEVERE ANEMIA REFUSING BLOOD TRANSFUSION: CASE STUDIES & REVIEW OF LITERATURE

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ABSTRACT

In the medical field, Jehovah's Witnesses (Watchtower and Bible Tract Society) are widely known for their prohibition against the receipt of blood transfusions. For this reason, this topic remains a critical issue in medical practice and ethics. Medically, it remains important because refusal of blood serves as a potential obstacle to optimal therapeutic intervention. The goals of anemia management include cessation of blood loss, meticulous conservation of blood, optimizing hematopoiesis, and assessing the patient's physiologic tolerance of anemia. As a result, physicians need to be aware of alternative therapeutic options for Jehovah's Witnesses. Several new procedures have emerged to address the medical needs of Jehovah's Witnesses. Stimulation of blood component production by agents such as erythropoietin, limited phlebotomy, hormonal suppression of menstrual cycles, some hospitals have initiated "bloodless surgery" programs, cell-saver auto transfusion, methods.

Keywords: Jehovah's witnesses, Blood transfusions, Erythropoietin, Bloodless surgery.

1. INTRODUCTION

To distinguish the normal effects of senescence from the signs and symptoms of anemia a thorough physical assessment, complete health history, and appropriate diagnostic workup should be used. The challenge can be compounded when; a patient does not accept a blood transfusion especially because of religious tenets as seen in Jehovah's Witnesses cases.

One of America's most flourishing religious groups is the Watchtower Bible and Tract Society—commonly known as “Jehovah’s Witnesses.” (JW) Born in the early 1870s as a Christian Bible study group in western Pennsylvania, it has grown into a worldwide organization comprising over four million adherents in over 200 countries. A central tenet of the group is a commitment to the Bible as the word of God (Jehovah) representing literal truth. Among the beliefs is their conviction that the Bible forbids them to accept blood transfusions—even to save their lives—because it would constitute the sin of “eating blood.” The line of thought that results in this conviction comprises two steps. First, Witnesses read the Bible as prohibiting Christians, as well as Jews, from eating blood. Second, they believe “eating blood” includes not only ingestion by mouth but also ingestion by other means—including blood transfusions.(Charles, 2011)

Jehovah's Witnesses are not opposed to surgery or medicine but, for deeply-held reasons of religious faith, decline blood transfusion. Jehovah's Witnesses worldwide believe that allogeneic blood transfusion is prohibited by Biblical passages in both the Old and New Testaments: There beliefs are as follows:

- To all mankind God said, 'But you must not eat the flesh with the life, which is the blood, still in it' (Genesis 9:4).
- To the Jewish nation he repeatedly said, 'The life of every living creature is the blood, and I have forbidden the Israelites to eat the blood of any creature, because the life of every creature is its blood' (Leviticus 17:14).
- To Christians he three times stated, 'You are to abstain from meat that has been offered to idols, from blood, from anything that has been strangled, and from fornication' (Acts 15:20,29, 21:25, The New English Bible).

While these passages are not, naturally, stated in medical terms, we view them as ruling out transfusions of whole blood and primary blood components: red cells, white cells, plasma, and platelets. Baptized Jehovah's Witnesses usually carry an Advance Medical Directive/Release document directing that no blood transfusions be given under any circumstances, and releasing doctors and hospitals of responsibility for any damages that might be caused by their refusal of blood. This document is renewed every year. Many Witnesses also fill out a more detailed Healthcare Advance Directive form that outlines their personal treatment choices regarding blood products and autologous blood procedures. This document should also form the basis of preoperative discussion with the surgeon and anesthetist.

2. AIM & OBJECTIVES

To discuss as how to handle the situation when a person having severe anemia presents with the challenge of declining blood transfusion, in a real-world scenario where critical thinking, evidence-based care, and collaboration with other providers must come together to serve these patient's unique needs. We also reviewed the literature to offer an organized approach to care for such patients.

3. MATERIALS AND METHODS

We came across 3 cases that refused blood transfusion due to religious beliefs during the period 2010-12

Case Study 1: A 65-year-old woman presented with the complaints of "feeling cold and tired" for about a week. The medical history included several chronic medical conditions; hemoglobin was 3.5 g/dl.

Case Study 2: A 73-year-old female presented with fatigue and pallor. Family history included a father who died of colon cancer at 56 years; two siblings, one with both hypothyroidism and type 2 diabetes and the other with hypothyroidism. Hemoglobin was 4.7 g/dl.

Case Study 3: A 65-year-old overweight female presented with pallor and fatigue. Laboratory results revealed a microcytic hypochromic anemia. Hemoglobin was 3.3 g/dl.

4. RESULTS

All these cases were advised to be admitted to hospital due to severity of anemia. Typically, a symptomatic patient with a hemoglobin level this low would receive a blood transfusion; however, blood transfusion was not an option for these patients because of their religious beliefs. They were informed that their blood count was low enough that a blood transfusion would generally be the treatment of choice but still they continued to decline blood transfusion even after understanding the risks. On further investigations these patients were found to have an iron deficiency anemia hence were prescribed iron supplements.

A review of the scientific literature on anemia and the situation, in which a patient refuses blood transfusion, was carried out.

5. DISCUSSIONS

These cases were admitted to the hospital due to the severity of anemia. The plan was to monitor her complete blood count and to treat the anemia. Since the blood transfusion was not an option for these patients because of their religious beliefs. Widely acceptable treatment alternatives could be erythropoietin a naturally occurring hormone produced by the kidneys. It stimulates the body to produce more red blood cells and is used to treat anemia. (Rosengart *et al.*, 1997), (Cothren *et al.*, 2002).

Improvements in surgical technique, decreased phlebotomy rates, and use of erythropoietin have allowed clinicians to perform quite complex surgical procedures such as coronary artery bypass grafting or liver transplantation.(Seu and Csete, 1996); (de Castro RM.*et.al* 1999), (Brooklyn, NY, Watch Tower Bible and Tract Society of Pennsylvania, 1977), (Muramoto, 2001),(Dasen *et al.*, 2000), (Brooklyn, NY , Watch Tower Bible and Tract Society of Pennsylvania, 2001). However, in an acute emergency with a significant amount of blood loss, awareness and preparation are key elements to limit further blood loss and improve the chances of patient survival. Jehovah's Witnesses (JWs) refuse blood products because they believe that if they voluntarily receive blood, they will turn to dust when they die. Their religious conviction against receiving blood and blood products can create a difficult clinical dilemma, particularly in the trauma setting. Although they refuse blood, they "cherish health and love life". Care for the

Jehovah's Witness patient can be a challenge and often a dilemma to clinicians because of the patient's religious beliefs and teachings against receiving blood and blood products, especially in emergency or trauma settings. (Nelson et al., 1995) reported their experience treating 77 Jehovah's Witness trauma patients.

Many alternatives to blood have been identified, including use of laser surgery, gamma knife radiosurgery, an argon beam coagulator, aminocaproic acid, granulocyte-colony stimulating factor. However, many of these alternatives are more expensive than blood. A variety of interventions can be utilized to minimize intraoperative blood loss. Acute normovolemic hemodilution may be a valuable means to reduce intraoperative blood loss.(Kovesi and Royston, 2003) Induced hypotension is another technique by which blood loss can be reduced intraoperatively (Dutton et al., 2003). However, this method is often impractical in the trauma patient who is already unstable or hypovolemic. Correction of coagulopathies is extremely important. Pharmacologic aids such as the serine protease inhibitor, aprotinin; lysine analogue antifibrinolytics such as epsilon aminocaproic acid and tranexamic acid; DDAVP; and recombinant human factor VIIa (rhFactorVIIa) may be useful in individual cases (Baker et al., 1998). There is evidence suggesting that rhFactorVIIa is useful as rescue therapy in patients with exsanguinating hemorrhage (McLoughlin et al., 1999). Strategies to be adopted to reduce metabolic demand include sedation, analgesics, neuromuscular blockade, and hypothermia.(Standl, 2000) For those centers that are equipped with hyperbaric chambers, significant increases in oxygen content can be realized with hyperbaric oxygen therapy (Cothren et al., 2002). Artificial blood substitutes (eg, per fluorocarbons) are still being investigated but promise to be of great utility in the future treatment of these patients (Gannon and Napolitano, 2002), (Jones et al., 2003) Indeed, there are case reports describing the use of human (Riegger et al., 2002) and bovine (Kramer, 2003) Hb products in Jehovah's Witness trauma patients. The use of these products is a matter of conscience by the Witness (Riegger et al., 2002).

A number of studies have documented that phlebotomy can result in a tremendous amount of blood loss in ICU patients (Foulke and Harlow, 1989), (Kost et al., 1999), reducing the frequency of testing and the size of the blood sample tube can reduce iatrogenic blood loss (Nearman and Eckhauser, 1983), (Howell and Bamber, 1987).

Increased red blood cell production can be accomplished by administering recombinant human erythropoietin and supplemental iron. Two points of interest need to be mentioned. First, it is important to keep in mind that there have been several cases in which the doctors did not use synthetic erythropoietin despite very low Hb values and their patients still survived. Clinician must bear in mind that erythropoietin contains small amounts of human albumin (Marelli, 1994), (Victorino and Wisner, 1997). Because albumin is a blood product, the subject may require discussion with the patient or patient's family. Most Jehovah's Witnesses will accept treatment with erythropoietin.

Cell salvage is a method of collecting blood loss during an operation and giving it back to the patient. When cell salvage is used, blood that is lost during the operation is collected into a machine. This filters and washes the blood to remove any contaminants. The blood can then be given back to the patient during the operation or afterwards. The advantages of this are that the

patient is given a transfusion of their own blood. Cell Salvage is deemed acceptable by many Jehovah's Witnesses as it does not involve transfusion of blood from an unknown donor. (deCastro, 1999)

Although an adult patient was entitled to refuse consent to treatment irrespective of the wisdom of that decision, the effectiveness of such a refusal was dependent on the doctors being satisfied.

The guidelines (In re. T (Adult: Refusal of Treatment), 1992) given by Australian court are as follows:

1. At the time of the refusal the patient's capacity to decide had not been diminished by illness or medication or by false assumptions or misinformation;
2. The patient's will had not been overborne by another's influence;
3. The patient's decision had been directed to the situation in which it had become relevant; and,
4. That where a patient's refusal was not effective, the doctors were free to treat in accordance with their clinical judgment of the patient's best interests.

It is also stated that in cases of doubt as to the effect of a purported refusal of treatment, where failure to treat threatened the patient's life or could cause irreparable damage to health, doctors and health authorities should not hesitate to apply to the courts for assistance .

On the other hand, emergency conditions do not allow physicians to discuss the patient's conviction. Many have an opinion that if there is any doubt about the patient's wishes the physician should first take whatever steps are necessary to stabilize and remove the patient from immediate danger of death or severe disability. (Finfer, 1994). In a Canadian court case, a doctor was found guilty of battery when he treated with blood transfusions an emergency JW patient who carried an undated and unwitnessed card. This ruling was criticised by the medical community in Canada (Braham's, 1989); (Trent, 1991).

In the United States, the court ordered a transfusion for a comatose patient despite the JW card. Similar court rulings involving incompetent JW patients under emergency conditions have been reported (Fontanarosa and Giorgio, 1991). In some instances despite assurance from officials that a physician is absolved from legal and ethical responsibility for withholding blood transfusions, wrongful death suits were brought against physicians by the families of JWs who died after they refused blood transfusions. One may view this situation from the perspective that if we can be sued either for treating or not treating with blood, we would rather it be for saving the patient's life.

6. CONCLUSIONS

Handling treatment refusals can be time-consuming, complex, and frustrating. While it would be much quicker and easier to accept treatment refusals to honor the patient's request, this clearly would not be ethically appropriate in the case of refusing life-saving therapy.

In attempting to balance patient autonomy with clinical beneficence, one must be careful not to apply decision too quickly, broadly, or rigidly. The said, "erring on the side of preserving life" does not trump the futility of the situation. The benefits and burdens of the therapy must be reflected on in light of the diagnosis, prognosis, and best interests of the patient who offers a treatment refusal.

When treatment refusals occur in non-life-threatening situations, clinicians should use the available time to assess the patient's decision-making capacity and pursue the reasons behind the refusal, not forcing the refused therapy on the patient until the situation becomes life-threatening. This is because the principle of erring on the side of preserving life does not apply in non-life-threatening.

In situations where patients are assessed to have the functional capacity for medical decision making, their refusal of treatment should be honored, even if it conflicts with the personal values of the clinician, and even if the reasons for the refusal appear to be irrational.

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