

Bloodless Cardiovascular Surgery Outcome Comparison

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For patients requiring highly complex cardiovascular surgery, how do outcomes differ for those requiring a bloodless surgery approach compared to those not refusing blood products? A growing number of patients needing cardiac surgery are refusing blood transfusion due to religious or other reasons, and with the national shortage of available blood supply in blood banks, it is worthwhile to consider the potential advantage of bloodless surgery protocols. The primary article I will be referencing in this paper reviews research literature over a 10-year timespan on the topic of bloodless protocols in cardiac surgeries on Jehovah's Witnesses and their respective outcomes when compared to those undergoing the same procedures not refusing blood (Chambault, A. L., Brown, L. J., Mellor, S., and Harky, A., 2021). I will also discuss how this information has ethical implications for nurses, and how we can uphold advocacy, autonomy, and fidelity in relation to our code of ethics (Potter, P. A., Perry, A.G., Stockert, P., and Hall, A., 2023, p. 317-318).

The idea of bloodless open-heart surgery might be surprising to some, and even a reckless choice to others. Yet, despite the controversy surrounding the topic of blood transfusion refusal, the prevalence of bloodless surgery is growing among patients and doctors alike. That leads us to ask: What measures can be taken to facilitate cardiac surgery without transfusion? Are patients putting themselves at higher risk of adverse outcomes and even death, should they decline to accept blood products? And lastly, how should healthcare professionals, including nurses, handle the care of such individuals, while adhering to the nursing code of ethics?

The article *Outcomes of cardiac surgery in Jehovah's Witness patients: A review*, helps us to get an idea of the perioperative process when it comes to patients refusing blood products in heart surgery. According to Chambault's review of 11 studies, a common

preoperative measure taken with Jehovah's Witness patients was "the use of Erythropoietin (EPO) and either oral or IV iron" to build up hemoglobin (Hb) levels, and this was found to be essential in decreasing the "risk of morbidity and mortality" (Chambault et al., 2021). Some measures taken intra-operatively were cell salvage, intraoperative normovolemic hemodilution, the use of "antifibrinolytics, heparinisation, and carefully considered surgical techniques" (Chambault et al., 2021). Post-operative interventions often included controlling blood pressure and temperature, as well as minimal blood draw sample size, and use of desmopressin and IV iron depending on patient needs (Chambault et al., 2021). While there are apparent modifications and additional steps in place throughout the cardiac surgery process for this population, does it all pay off?

According to Chambault, when examining post-operative outcomes, "the Witness group experienced significantly less postoperative blood loss compared to the non-Witness control" (Chambault et al., 2021). Interestingly enough, while it would seem unlikely that blood loss would be the same if not higher in the patients not accepting transfusion, "the results suggest that Witnesses do not have more postoperative blood loss than non-Witnesses, and may even have better outcomes due to strategies employed." (Chambault et al., 2021). What could account for this suggested better outcome? The author states "This may be explained by more careful surgery and the blood conserving strategies discussed in the studies." (Chambault et al., 2021). When the surgeries were said and done, it was noted that that research shows no significant difference in the morbidity or mortality rates between Witnesses and non-Witnesses (Chambault et al., 2021).

How though does this relate to the nursing profession? An issue nurses often come across is treating patients according to the patient's wishes, although we would not always

agree this is the best course for them. This is where advocacy comes into play in the nursing code of ethics “As a nurse you advocate for the health, safety, and rights of patients, including their right to privacy and their right to refuse treatment” (Potter et al., 2023, p. 318). The concept of fidelity supports this thought, which is summarized by the idea that “we strive to provide excellent care to all patients, including those whose values are different from our own.” (Potter et al., 2023, p. 318)

In the discussion of treating patients who refuse blood transfusion on the principle of their Bible-based faith, it is important that we do our utmost to put any biases aside and respect the decisions of our patients, just as we would want to be respected. One article references the principle of autonomy stating, “there is seldom reason to interfere with this choice because it rarely harms another individual.” (Cummins, P. J. and Nicoli, F., 2018). In conclusion, this review of current literature suggests that “the use of a bloodless protocol for these patients does not appear to significantly impact upon clinical outcomes when compared to non-Witness patients, and it has even been suggested that a bloodless approach could provide advantages to all patients undergoing cardiac surgery” (Chambault et al., 2021).

There are bloodless surgery centers popping up all over the world, and this potential evidence of positive outcomes in bloodless medicine should give cause for pause. There are always associated risks with blood transfusions, and there are given risks in refusing. Yet, it is undeniably preferred that transfusions are avoided when possible, and it may actually be beneficial to consider implementing strategies for blood alternatives in all surgical populations should the benefit outweigh the risk.

Works Cited

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