



Research project summary

PRICE 2: A phase 3 randomized controlled trial of phlebotomy resulting in controlled hypovolemia to prevent blood loss in major hepatic resections

- Principal Investigator: Guillaume Martel
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- Awarded \$497,252 from the Canadian Institutes of Health Research (CIHR) in January 2018

The need for major liver surgery is growing rapidly. Despite improvements in techniques, these operations continue to carry a significant risk of hemorrhage and blood transfusion. Hypovolemic phlebotomy represents a simple, cheap, safe, and underreported intervention to decrease blood loss and transfusion in liver surgery. Blood transfusion is known to pose significant risk for patients. This technique involves the removal of blood from a patient prior to cutting the liver. It is thought that this approach decreases the blood pressure within the liver, which may lead to less bleeding while it is being cut. The patient's own blood is given back once the liver has been cut. As a result, it is thought that this technique decreases the need for blood transfusion. This grant proposes a clinical trial to test whether hypovolemic phlebotomy is in fact effective at reducing the need for blood transfusion in major liver surgery. Patients from three Canadian liver surgery hospitals will be randomly assigned to receiving surgery using the usual technique or using hypovolemic phlebotomy. After surgery, patients will be followed for 30 days and the number of patients requiring blood transfusions will be compared between the two study groups. If successful, this study will lead to the saving of large amounts of altruistically donated blood and will have a major impact upon all future liver surgeries worldwide.

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