What if you were your own blood donor for surgery?

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(HealthDay)—Heart surgery patients may fare better if they have their

own blood "recycled" and given back to them during the procedure, a preliminary study suggests.

The study focused on so-called "intraoperative autologous" blood donation—where patients have some blood removed at the start of surgery for their own use. The goal is to avoid transfusions of donor blood during surgeries where patients typically have a lot of bleeding.

Among nearly 700 heart surgery patients studied, researchers found the tactic did seem to reduce blood transfusions. Patients who self-donated also had shorter hospital stays.

This type of blood donation is already done at some hospitals, though experts said it's hard to tell how common it is.

Dr. Robbin Cohen, a surgeon at the University of Southern California in Los Angeles, said he has been using the approach for a few years.

It's simple and, in his experience, beneficial, said Cohen, who was not involved in the new study.

That said, the findings do not prove self-donation during heart surgery is the way to go, according to Cohen. The study looked back at patient records; it was not a trial that randomly assigned patients to either self-donate or not.

"What you need are well-designed prospective trials," Cohen said.

But, he added, "this study is a good start. The suggestion of benefit is there."

The findings were presented at the annual meeting of the Society of Thoracic Surgeons, being held this week in San Diego. Studies presented

at meetings are generally considered preliminary until published in a peer-reviewed journal.

Dr. Eric Zimmermann led the research when he was based at New York-Presbyterian Queens (NYPQ) Hospital in New York City.

He agreed that more studies are needed in order to spur wider use of self-donation during heart surgery. It's different, he noted, from another practice known as blood banking—where patients have blood removed and stored weeks before surgery, to use in case they need a transfusion.

Zimmermann, who is now a research fellow at Oregon Health & Science University in Portland, pointed to some advantages of the intraoperative tactic: It eliminates the cost of blood banking. Plus, the quality of banked blood degrades somewhat during storage, he said.

With intraoperative donation, doctors remove some of the patient's blood at the start of surgery and store it as "whole blood," with only clot-preventing medication added to it. "Whole" means the blood contains all of its natural components. Banked blood is often separated into different parts, like red blood cells and platelets (cells that help prevent bleeding by clumping together).

For the new study, Zimmermann's team analyzed records from patients who had heart surgery at NYPQ Hospital between 2009 and 2017. In 2013, the hospital launched a "more aggressive" approach to intraoperative donation in which most patients having open-heart surgery self-donated.

The study group included 420 patients who had surgery after that policy shift, and 268 who had surgery before it. Only a small percentage of the latter group self-donated, according to Zimmermann.

Overall, the study found, the more aggressive policy seemed to reduce blood transfusions. Only 40 percent of patients needed a transfusion after the change, compared to 70 percent before.

And when patients in the more-recent group needed a transfusion, they typically required less blood. Their hospital stay was a day shorter, on average.

What's not clear, though, is whether the self-donations are the reason patients got out of the hospital sooner. In fact, Zimmermann said, it's not clear precisely how the tactic benefits patients.

"We need a better scientific explanation for why it works," he said.

Cohen said returning whole blood to patients' bodies may help prevent bleeding because it contains their natural clotting factors and platelets.

For now, both he and Zimmermann said patients who are scheduled for heart surgery can ask whether intraoperative donation is an option for them.

"Most surgeons discuss the potential need for transfusion with patients, so this could enter into that conversation," Cohen said.

Even self-donation comes with potential risks, though. According to Zimmermann, it can deplete patients of oxygen-carrying red blood cells, and it's possible for the extracted blood to become contaminated with bacteria or viruses.

More information: Eric Zimmermann, M.D., postdoctoral research fellow, Oregon Health & Science University, Portland; Robbin Cohen, M.D., associate professor of surgery and director, Huntington Memorial Hospital cardiothoracic and lung cancer surgery program, University of

Southern California Keck School of Medicine, Los Angeles; Jan. 28, 2019 presentation, Society of Thoracic Surgeons annual meeting, San Diego

The U.S. National Heart, Lung, and Blood Institute has more on blood transfusions.