

Bloodless medicine

Techniques and planning can eliminate the need for transfusions. **Interviewed by Leslie Stevens-Huffman**

“Bloodless medicine” started as an alternative designed to meet the needs of patients who opposed blood transfusions for religious reasons. Now, the practice has gained popularity due to the reduced risk of infection, better outcomes and lower treatment costs.

Bloodless medicine refers to the use of devices, techniques and careful preparation that enable patients to lose less blood — especially during surgical procedures. The result is that many patients are able to undergo surgery without external blood transfusions.

The statistical outcomes for patients who have fewer transfusions during surgery are better. Patients also are learning that risk avoidance is a medical benefit resulting from the bloodless techniques, regardless of their religious beliefs.

“We started treating patients with bloodless techniques here in Orange County in the early 1980s, so we have a great deal of experience,” says Dr. Vinod Malhotra, medical director of the Bloodless Medicine and Surgery Program at Chapman Medical Center. “Because 60 percent of surgeries are elective and preplanned, the benefits achieved through elimination of blood transfusions are obvious. Patients just need to be educated and learn to ask for them from their physicians.”

Smart Business spoke with Malhotra about what patients should know about bloodless medicine and its related benefits.

What are the advantages of bloodless medicine?

First of all, there is less risk of contracting a blood-borne disease. While today we are able to detect the presence of many viruses such as HIV in transfused blood, there was a time when we were not able to do so.

Unfortunately, many patients contracted HIV and hepatitis C through blood transfusions. What we do know, is that by avoiding transfused blood altogether, patients contract fewer diseases.

Also, an allergic reaction occurs in 4 to 10 percent of all patients who receive a trans-



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fusion. Studies have shown that patients who receive banked blood experience increased adverse outcomes and longer hospital stays. Accordingly, the cost of treatment goes up.

In addition, there is now growing evidence of the clinical adverse effects of blood transfusions on a patient's immune system. Studies have also shown that exposure to red blood cell transfusions increases the risks of the recurrence of cancer and the development of post-operative infection.

Is there a quality differential with transfused blood?

Yes, there certainly can be. Blood actually ages and legally, it can still be transfused up to 42 days after the date of donation. When we examine red blood cells under an electron scanning microscope, what we observe is that after 20 days, the red blood cells actually start to shrink so the blood loses its vitality.

Unfortunately, sometimes due to shortages, not every patient requiring a transfusion receives freshly donated blood. Trauma centers need and use the most blood, so they have it on hand; consequently, they frequently transfuse some of the oldest blood to, ironically, the sickest patients.

This is also the problem with patients

attempting to donate and store their own blood prior to surgery. Patients often may need to donate several units, but it requires about a month to donate that amount of blood safely. By the time of the surgery date, the blood has aged and become stale when it is transfused.

What makes bloodless medicine surgical techniques unique?

Prior to elective surgery, the surgeon should work with the patient to build up his or her red blood cell count. Patients should avoid aspirin and other blood thinners to help reduce bleeding during the procedure.

Surgeons can further minimize blood loss by using alternative surgical techniques, such as carefully avoiding bleeding during surgery and using a laparoscopic approach.

Additionally, surgeons may use a machine called a cell saver that actually siphons away a patient's blood that is lost during the procedure, cleans it, separates out the red blood cells and reinfuses the cells into the patient. These machines are available to hospitals, so patients should ask their surgeon to make arrangements to use the machine prior to surgery.

What differentiates one bloodless program from another?

A team approach at the hospital and the amount of experience of the surgical staff with the bloodless techniques is a vital component to outcomes, as is the willingness of the surgeon to use them.

Patients should not only ask about the experience of the medical team and their outcomes but make certain that the surgeon understands the philosophy and the patient's wishes.

More than 89 percent of patients say they prefer not to have a transfusion during surgery. Considering the risk reduction, bloodless medicine just makes sense.

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