

Where is the world's safest blood supply?

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Health care is changing drastically and with these changes come opportunities. One area that will have an enormous impact on surgical patient outcomes will be the recycling of the patient's own blood (autotransfusion). Perioperative autotransfusion has been clinically available since the 1960s. The Food and Drug Administration (FDA), in 1973, approved the sterile collection, filtration, concentration (through centrifugation), removal of debris (washing), and reinfusion of the patient's own blood during surgery and postoperatively. In the past decade, developments have led to a unique combination of autologous apheresis techniques and allowed for the separation of the patient's own blood into red blood cells, platelets, and plasma. These can be selectively administered back to the patient based on his or her particular blood-component needs throughout the procedure (autologous blood component therapy).

Autotransfusion: risks, supply, and demand

Over the past 20 years, the concern over the safety of the blood supply represents a critical challenge. In the early 1980s, the fear of HIV (AIDS) and hepatitis alerted the world that blood may not be safe. Studies and increased testing generated complex medical/legal debates regarding the appropriate use of allogeneic bank blood and blood components ie, red blood cells, platelets, fresh frozen plasma, and cryoprecipitate.

In 1995, the American Association of Blood Banks Gallup Poll indicated that more than 90% of the public preferred to receive their own blood during surgery. However, the 1996 study by the College of American Pathology



gists showed that 91.3% of all surgical transfusions relied on the bank blood, 4.5% utilized pre-deposited blood, and only 2.5% used perioperative blood salvaging in over 600 major medical centers. Clearly, current transfusion practices are not meeting the needs or requests of patients.

Even more perplexing is the 20% decrease in blood donors since 1979, while the demand for blood has grown 20% during the same time period. The increased demand for blood during surgery has been attributed to the fact that more complex surgeries are being performed, and our country's population is living longer. The decrease in donors and donor blood is attributed to public fear and increased testing. Although testing does increase the safety of the bank blood supply, it also decreases the number of available donor units suitable for transfusion. Over the past two decades, community blood banks relied on three-day reserves of blood. Now that reserve has dropped to one-half day. Some transfusion specialists predict that the demands will soon exceed the supply. The lack of supply reinforces the need for the recycling of a surgical patient's blood, because a large quantity of all blood ordered is related to surgical patients. When the medical profession and the public learn more about safe transfusion options and the availability of perioperative autotransfusion, the demand for knowledgeable autotransfusionists will increase.

Certification

Because there are so many different health professionals operating blood cell separation devices (ie perfusionists, nurses, surgical technologists, anesthesia technicians, and physi-

cians), little has been done to assure minimum knowledge levels in autotransfusion. In 1992, the American Board of Clinical Autotransfusion (ABCA) was established by a group of clinical specialists interested in the advancement of knowledgeable skills of the operators of clinical autotransfusion. Board members represent a wide range of professional experiences (ie perfusion, surgical technology, nursing, manufacturing, blood banking and anesthesia technology). ABCA began offering the Clinical Autotransfusion Certification Examinations in 1994.

While changes and demands increase, operators of these devices must be able to assure the public, surgeons, and health care facilities that a minimum knowledge base exists to properly deliver the level of autotransfusion and autologous blood component technology required. A large percentage of hospitals have already begun verifying certification of individuals operating autotransfusion devices. This process of improvement requires a commitment to knowledge and standards of practice for perioperative autotransfusion. In July 2001, the American Association of Blood Banks will publish *Perioperative Standards for Autologous Blood Collection and Administration*.

The ABCA offers the national examination and board certification process whereby individuals with appropriate medical education and clinical activity can become certified. The ABCA acts as an umbrella agency, offering continuity and standardization in the field of autotransfusion to many different allied health organizations wanting to assure the public that their members can meet standards in autotransfusion.

Certification in the practice of clinical autotransfusion by the ABCA provides proof to your employer, other health care professionals, your peers, and the public that, not only have you been educated and trained in the principles that are unique to autotransfusion technology, but that you have demonstrated a broad range of knowledge and standards for the practice of clinical autotransfusion by successfully completing a written examination. Certification can be a means of upward mobility, a condition of employment, a route to higher pay and recognition.

Upcoming autotransfusion certification exam

On Wednesday, May 16, 2001, at 5:30 pm, the American Board of Clinical Autotransfusion (ABCA), in cooperation with the Association of Surgical Technologists (AST), will offer the ABCA Certification Examination at AST's 32nd Annual Conference in Atlanta, Georgia. This is an opportunity for surgical technologists who have been operating autotransfusion devices to sit for the national autotransfusion examination. To apply and take the examination you must be able to verify that autotransfusion is part of your job description and that you have performed 50 autotransfusion cases per year for the last two years. The examination fee is \$250. All forms and documents must be received no later than April 24, 2001. To receive ABCA's Examination Application Form, Study Guide, and other required forms, please register on line at BloodSafety.net or mail your application request to ABCA, 1105 Shana Circle NE, Suite C, Marietta, Georgia 30066-1400.