Preparation of fibrin glue from single-donor fresh-frozen plasma.

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Abstract:

Fibrin glue is used widely in Europe as a tissue sealant and hemostatic agent. The European glue is prepared commercially from pooled human blood. It is not available in this country because of the risk of transmission of hepatitis B, acquired immune deficiency syndrome, and other blood-transmitted diseases. We describe a cryoprecipitation technique for preparation of fibrin glue from single-donor fresh-frozen plasma. This technique enables the glue to be made in large quantities with no greater risk of disease transmission than with that from the transfusion of single-unit fresh-frozen plasma. We have found that the glue is a useful tool in surgery. By helping to control difficult bleeding, its use can decrease the need for blood transfusions and shorten operating room time. It also is effective as a means to pretreat highly porous vascular prostheses that currently are used infrequently because of bleeding. These porous grafts offer potential advantages in handling, suturing, and long-term patency. This new technique of fibrin glue preparation may make this useful surgical adjunct as readily available in this country as it is in Europe.