Hemostatic effectiveness of fibrin glue derived from single-donor fresh frozen plasma.

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Abstract:

Fibrin glue derived from pooled human blood is an effective sealant for high-porosity vascular grafts and a valuable topical hemostatic agent in heparinized patients. Use of this agent in the United States is prohibited because of potential transmission of hepatitis B, acquired immunodeficiency syndrome, and other serologically transmitted illnesses. We have developed a cryoprecipitation technique that allows preparation of fibrin glue from single-donor fresh frozen plasma. Use of this agent presumably entails no greater risk of disease transmission than intravenous administration of single-unit fresh frozen plasma. This report describes our early clinical experience with this material. Fibrin glue was used as a sealant for porous woven Dacron tubular prostheses and cardiovascular patches in 19 patients. The fibrin glue sealant has also been employed to control bleeding from needle holes and small anastomotic tears in 22 patients. No patient in this series had a bleeding complication from a suture line or graft treated with fibrin glue. This experience indicates that like fibrin glue from pooled blood, fibrin glue from single-donor plasma is effective as a graft sealant and topical hemostatic agent. Preparation of fibrin glue from single-donor plasma is simple and economical, and may provide cardiothoracic surgeons in the United States with a widely available, valuable hemostatic adjunct.