Four years' experience with fibrin sealant in thoracic and cardiovascular surgery.

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Abstract:

A single-donor fibrin sealant system was used in 689 thoracic and cardiovascular surgical procedures over the 4-year period between April 1, 1985, and March 31, 1989. An excellent overall success rate (646/689, 94% effective) was achieved with specific applications, including reduction of leakage of air (29/33, 88% effective), blood (595/ 634, 94% effective), and fluid (14/14, 100% effective), as well as positioning of anatomical structures such as coronary bypass grafts (8/8, 100% effective). Application methods included use of spray bottles (477/497, 96% effective), syringes (165/186, 89% effective), and a Silastic cannula through the flexible fiber-optic bronchoscope (4/6, 67% effective). The system was used in a wide variety of cardiac, pulmonary, esophageal, and vascular procedures to seal staple lines, suture lines, anastomoses, conduits, fistulas, and raw surfaces. No complications with this single-donor system secondary to blood-borne disease have been documented. Overall infection occurred at a nominal rate (16/689, 2%). Thus, fibrin sealant has been a useful tool to control the leakage of air, blood, acid fluid during a wide variety of thoracic and cardiovascular procedures and may be of benefit to other surgeons.