Reduction of hemorrhage after knee arthroplasty using cryo-based fibrin sealant.

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Abstract:

The spray application of cryo-based fibrin sealant was evaluated for reducing hemorrhage in a complex, anticoagulated canine model of knee joint arthroplasty. Nine heparinized dogs underwent bilateral knee arthroplasty under tourniquet control with each animal having 3 mL of fibrin sealant sprayed onto one joint and the other joint serving as control. The fibrin sealant significantly reduced total and incremental bleeding as compared to the control side ($P < .05$). In addition, the hemostatic effectiveness of the fibrin sealant increased as bleeding propensity increased ($P < .05$). This study suggests that fibrin sealant may reduce bleeding from orthopedic joint replacement in human patients undergoing routine operations as well as those receiving forms of anticoagulation to reduce the incidence of deep venous thrombosis and pulmonary embolus.