Fibrin sealant facilitates hemostasis in arteriovenous polytetrafluoroethylene grafts for renal dialysis access.

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Abstract:

A prospective randomized study was performed to evaluate the efficacy of fibrin sealant (FS) in patients undergoing upper-extremity polytetrafluoroethylene (PTFE) graft placement for dialysis. This procedure appears to be a reproducible and clinically relevant model for evaluating FS in vascular surgery. Consenting adult patients (n = 28) undergoing placement of a PTFE graft (6 mm) were randomized to either the treatment group using FS (Hemaseel APR, Haemacure Corp., Sarasota, FL) or control comparator groups (four) of bovine thrombin (T) (Thrombogen, GenTrac Inc., Middleton, WI), pressure (P), bovine thrombin (Thrombogen, GenTrac Inc.) -soaked cellulose sponges (TG) (Gelfoam, Upjohn Co., Kalamazoo, MI), or oxidized regenerated cellulose (S) (Surgicel, Johnson & Johnson, New Brunswick, NJ). All patients received heparin (3000 IU intravenous push) before placement of vascular clamps. The mean time to hemostasis was 29.3 seconds for FS, 147.4 seconds for T, 872.2 seconds for P, 346 seconds for TG, and 1044.5 seconds for S. There were no significant adverse events. FS appeared to be a superior hemostatic agent in these vascular procedures. No complications from FS were noted.