A randomised trial of fibrin sealant in peripheral vascular surgery.

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Abstract:

In a prospective randomised trial 39 patients undergoing either arterial bypass surgery with a polytetrafluoroethylene (PTFE) bypass graft (n = 18) or aortic aneurysm repair with a woven Dacron graft (n = 21) were randomised either to receive fibrin sealant as a topical haemostatic agent at the arterial anastomosis or to act as control. The main outcome measure was the time taken to achieve haemostasis at the suture line. The median time to achieve haemostasis was 0.5 min (range 0-11 min) in the treatment group and 4 min (range 0-21 min) in the control group. This difference was statistically significant $p < 0.014$ by the Mann-Whitney test. Immediate haemostasis on release of the clamps was achieved in 13/21 patients in the treatment group and in 4/18 patients in the control group ($p = 0.023$ by Fisher's exact test). There was no difference in total operative time or operative blood loss. No patients in the treatment group suffered any perioperative thromboembolic event and 1 patient in the control group suffered an early graft occlusion. There was no evidence of transmission of hepatitis B or C, or parvovirus B19. In conclusion, fibrin sealant is an effective topical haemostatic agent for arterial suture lines involving PTFE or woven Dacron.