

Reducing blood loss after total knee replacement: a fibrin solution.

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Abstract:

Blood loss during total knee replacement (TKR) remains a significant concern. In this study, 114 patients underwent TKR, and were divided into two groups based on whether they received a new generation fibrin sealant intra-operatively, or a local infiltration containing adrenaline. Groups were then compared for mean calculated total blood volume (TBV) loss, transfusion rates, and knee range of movement. Mean TBV loss was similar between groups: fibrin sealant mean was 705 ml (281 to 1744), local adrenaline mean was 712 ml (261 to 2308) ($p = 0.929$). Overall, significantly fewer units of blood were transfused in the fibrin sealant group (seven units) compared with the local adrenaline group (15 units) ($p = 0.0479$). Per patient transfused, significantly fewer units of blood were transfused in the fibrin sealant group (1.0 units) compared with the local adrenaline group (1.67 units) ($p = 0.027$), suggesting that the fibrin sealant may reduce the need for multiple unit transfusions. Knee range of movement was similar between groups. From our results, it appears that application of this newer fibrin sealant results in blood loss and transfusion rates that are low and similar to previously applied fibrin sealants.