Extended experimental and preliminary surgical findings with autologous fibrin tissue adhesive made from patient's own blood.

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Abstract:

A surgical tissue adhesive can be made from the patient's own blood. We have been refining the procedures for manufacturing autologous fibrin tissue adhesive to facilitate its use in the operating room and to increase its bonding strength. Fibrin tissue adhesive efficacy depends on fibrinogen concentration. We found that fibrinogen precipitation using the ammonium sulfate method produced the highest concentration. Bonding power was compared with that of the commercial glue 10 minutes and 30 minutes after glueing two pieces of 1 x 1 cm² human dura together. Bonding strength of the autologous product was close to that of the commercial product. Comparisons of fibrinolysis inhibition time of autologous fibrin tissue adhesive and commercial glue in experiments on rats over a period of one hour to six days after subcutaneous injection are described.