Microvascular sutureless adhesive bonding anastomosis with a new soluble hollow stent.

Authors: Liang X., Sun G., Hu B., Li J.

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Abstract:

The aim of this study was to assess a new soluble hollow stent used in an experimental sutureless adhesive bonding technique for microvascular anastomosis. Twenty-four New Zealand white rabbits were randomized into 2 groups. Twelve end-to-end anastomoses of carotid arteries were performed with glue and stent in group A. In control group B, 12 anastomoses were performed by manual suturing. Anastomoses were timed; immediate and late patency at 1 day, 7 days, and 3 weeks after surgery were evaluated by ultrasonography. Specimens were then analyzed histologically. This adhesive bonding technique took 7.02 +/- 1.26 minutes to perform while the hand-sewn technique took 15.48 +/- 2.10 minutes. Immediate and late patencies of the 2 groups were not statistically different. The new technique using glue and stent appeared to be timesaving, feasible, and efficient.