Experimental use of fibrin tissue adhesive in middle ear surgery.

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Abstract:

The biocompatibility of a new tissue adhesive was tested. Its major advantages are adhesions, hemostasis, and the promotion of wound healing. In experimental surgery on 43 middle ears of chinchillas, documented by histological evidence obtained 45 days after operation, the validity of the following two hypotheses was established. 1. That fibrin tissue adhesive placed upon the footplate of the stapes is biologically compatible, biodegradable and does not cause toxic, inflammatory or foreign body reactions, or other tissue damage to middle ear structures. 2. That a small piece of bone glued on the long process of the incus with fibrin tissue adhesive shows permanent tissue union. In addition, in cases where the inner ear was accidentally opened by surgically subluxating the stapes and adhesive was free to enter the vestibule, evidence was obtained that there was no damage to inner ear structures. This finding deserves further investigation.