

Fibrin tissue adhesive and autologous concha cartilage for reconstruction of the posterior-superior canal wall of the chinchilla middle ear.

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Abstract:

Hypothesis: We conducted this study to prove that fibrin tissue adhesive (FTA) is safe, efficacious, biocompatible, and readily biodegradable with no deleterious side effects for fixation of a cartilage graft to bone along the chinchilla canal wall. Methods: A posterior-superior canal defect was created in 12 chinchillas. The canal walls of six chinchillas were closed with autologous concha cartilage alone, whereas the canal wall of the remaining six animals were closed with cartilage in conjunction with fibrin tissue adhesive. Results: Animals were killed 8 weeks postoperatively. Three of six cartilage grafts were displaced in the graft alone group, whereas all six grafts in the cartilage with FTA group healed without displacement. Conclusion: Fibrin tissue adhesive was found to be effective, biocompatible, biodegradable, and without any deleterious side effects for reconstruction of the superior-posterior canal wall of chinchillas.