

Comparison between fibrin tissue adhesive, epineural suture and natural union in intratemporal facial nerve of cats.

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Abstract:

Our objective was to study intratemporal anastomosis of the facial nerve in cats. Clinical, electrophysiological and histological results of the use of fibrin tissue adhesive, epineural suture and natural adhesion were compared. The 30 adult cats studied had undergone mastoidectomy exposure, and section of the facial nerve 1 cm before its exit from the stylomastoid foramen. Anastomosis was then undertaken, using epineural suture combined with stabilization through fibrin tissue adhesive, and union of the stumps without stabilizing them. Each type of anastomosis was carried out in 10 animals. Clinical, electrophysiological and histological assessments of both the site of anastomosis and the ventral branch of the facial nerve followed the aforementioned procedures. By means of statistical analysis, the authors reached the following conclusions: 1) Considering the clinical assessment per se, both groups with fibrin tissue adhesive and suture showed similar features and results, which in both cases were better than those following natural union. 2) Considering the electrophysiological results per se, the use of fibrin tissue adhesive was superior to any other method used. 3) Considering the histological examination per se, both groups with fibrin tissue adhesive and suture revealed similar features which were more favourable than those shown by natural union. 4) In the overall comparison of the various parameters in the three groups, the use of fibrin tissue adhesive achieved better results than any other method. Based on the results of this study, the authors conclude that the use of fibrin tissue adhesive has technical advantages, and that the results of this use outweigh those achieved with both epineural suture and natural union. The authors recommend this technique as the most beneficial to be resorted to, for

intrapetrous anastomosis of the facial nerve.