Effectiveness of fibrin coating in the management of web formation after laryngomicrosurgery.

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Abstract:

Purpose To explore the effectiveness of fibrin coating in reducing web formation after endoscopic management of the anterior commissure of the larynx. Materials and methods Using a spray device that is generally used for laparoscopic operations, we covered the wound with fibrin glue (Bolheal) to avoid web formation. This technique was employed in cases wherein the anterior commissure was mainly managed by laser operation; the glue was sprayed after vaporization. Fibrinogen was first sprayed and the wound was properly soaked with a swab, which was followed by application of thrombin. We used this method in 17 cases and evaluated voice function by acoustic analysis - pitch perturbation quotient (PPQ) and amplitude perturbation quotient (APQ) - and maximum phonation time (MPT) before and after the operation. Results No severe web formation was observed at three months after the operation. PPQ values improved from 3.048 +/- 2.801% to 0.653 +/- 0.463% ($p < 0.05$, paired t-test). APQ values improved from 7.996 +/- 5.003% to 3.042 +/- 1.872% ($p < 0.05$, paired t-test). Voice quality did not worsen in any of the cases. MPT values improved from 17.2 +/- 10.8 s to 26.7 +/- 14.2 s ($p < 0.05$, paired t-test) Voice function improved 3 months after the operation in all cases. Conclusion The fibrin coating method is an easy and effective approach to avoid web formation without creating cervical wounds in cases that require handling of the anterior commissure under laryngomicrosurgery.