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Peri-operative care in voice surgery

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Corticoids

- Framework surgery
 - Commonly used
 - Reduce potential laryngeal oedema in early post-op
 - Sometimes associated with antibiotics per-operative, (post-operative)
 - No literature found
 -
- Microsurgery:
 - Most often local injection during surgery
 - Showed better vocal outcome
 - Rare cases of transient vocal fold atrophy

[Comprehensive Outcome Researches of Intralesional Steroid Injection on Benign Vocal Fold Lesions.](#) Wang CT, Lai MS, Hsiao TY. J Voice. 2015 Sep;29(5):578-87. doi: 10.1016/j.jvoice.2014.11.002.

[Efficacy and Safety of Adjunctive Steroid Injection After Microsurgical Removal of Benign Vocal Fold Lesions.](#) Cho JH, Kim SY, Joo YH, Park YH, Hwang WS, Sun DI. J Voice. 2017 Sep;31(5):615-620. doi: 10.1016/j.jvoice.2017.01.003.

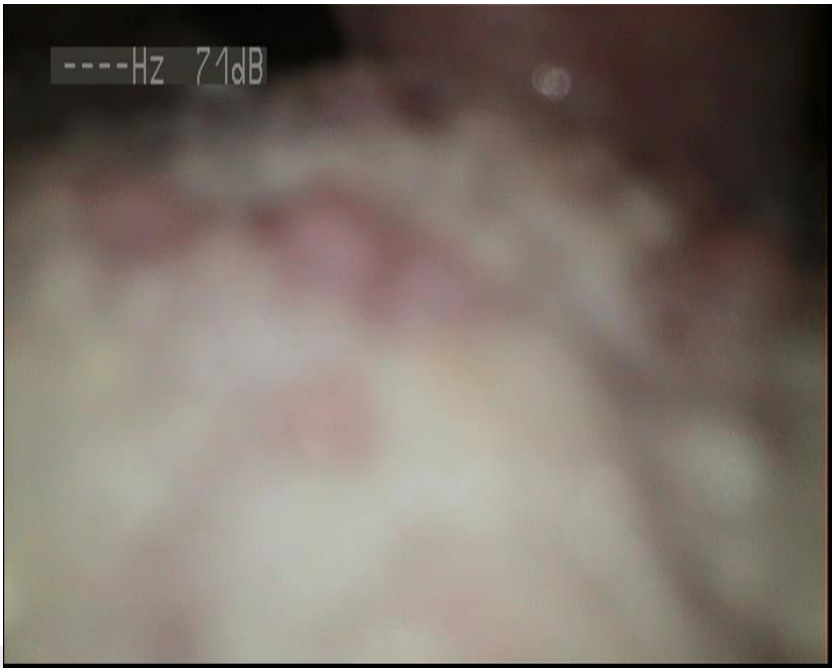
Corticoids

- Microsurgery:
 - Post-operatively, sometimes helpful

Pre-op

J6 post-op

J30 post-op& after 5 days cortico PO



Anti-reflux

- No significant effect in one retrospective study

[The effect of antireflux therapy on phonosurgical outcomes: a preliminary retrospective study.](#) Ruiz R, Achlatis S, Sridharan S, Wang B, Fang Y, Branski RC, Amin MR. J Voice. 2014 Mar;28(2):241-4. doi: 10.1016/j.jvoice.2013.09.005.

- But in some posterior lesions
 - Granulomas: pre and post-op!!!

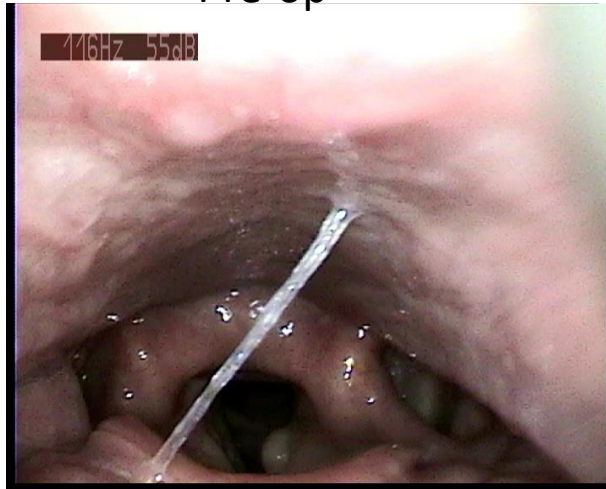
[Comparison of the effects of esomeprazole plus mosapride citrate and botulinum toxin A on vocal process granuloma.](#) Lei L, Yang H, Zhang X, Ren J. Am J Otolaryngol. 2017 Sep-Oct;38(5):593-597. doi: 10.1016/j.amjoto.2017.01.039



Anti-reflux

- No significant effect in one retrospective study
- But in some posterior lesions
 - Granulomas: pre and post-op!!!
 - And selected cases:

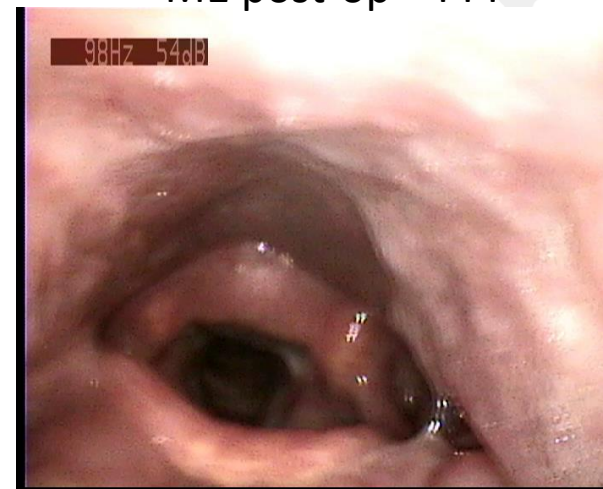
Pre-op



J6 post-op



M1 post-op + PPI



M2 + PPI



Tobacco stop

- Common advice
 - Pre-op and post-op
 - Reduction of local inflammation during and after surgery
 - Better healing
 - Prevention of recurrence for some lesions
- E-cigarette?
 - Experimentally cytotoxic for fibroblasts
 - No modification of the DNA
 - But at lower degree than cigarette!

[Effects of Electronic \(E\)-cigarette Vapor and Cigarette Smoke in Cultured Vocal Fold Fibroblasts.](#) Martinez JD, Easwaran M, Ramirez D, Erickson-DiRenzo E. Laryngoscope. 2023 Jan;133(1):139-146. doi: 10.1002/lary.30073.



Voice rest pre-op

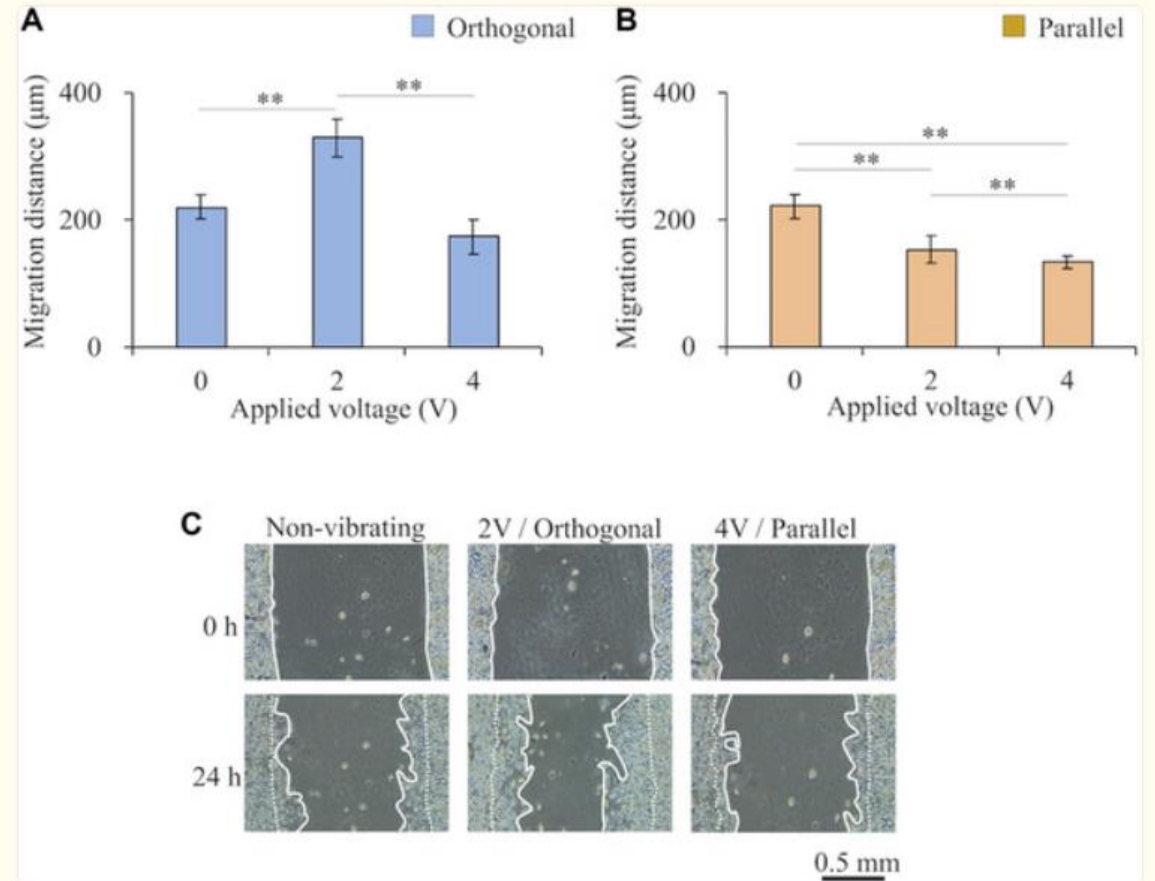
- Rationale:
 - Not to maintain vocal misuse/abuse
 - Reduce the phonotraumatism ->the VF inflammation
- Pre-operative
 - Sometimes, it helps to reduce inflammation of the vocal fold and make the surgery easier
 - Even better with speech-therapy

The role of voice rest after micro-laryngeal surgery for benign vocal fold lesions.

Cohen JT, Fridman E, Trushin V, Benyamini L, Duek I, Shinnawi S, Keshet Y, Cohen A, Paker M. Eur Arch Otorhinolaryngol. 2022 Feb;279(2):835-842.

Voice rest post-op

- Classical advice
- Low patients adherence
- Rationale:
 - Not to steer/stretch the healing zone,
 - Not to mobilize the micro-flap
- Basic science:
 - Effect of mechanical vibration on fibroblasts growth and migration



The role of voice rest after micro-laryngeal surgery for benign vocal fold lesions.

Cohen JT, Fridman E, Trushin V, Benyamini L, Duek I, Shinnawi S, Keshet Y, Cohen A, Paker M. Eur Arch Otorhinolaryngol. 2022

Feb;279(2):835-842.

Voice rest post-op

- Clinical studies also advocate no or minimal duration of voice rest
 - No difference found in the littérature depending of the voice rest
 - Completely quite, partially quiet, no voice rest
 - Duration: 3, 5, 7 days

- King RE, Novalski CK, Rousseau B. Voice Handicap Index Changes After Microflap Surgery for Benign Vocal Fold Lesions Are Not Associated With Recommended Absolute Voice Rest Duration. *Am J Speech Lang Pathol*. 2022 Mar 10;31(2):912-922. doi: 10.1044/2021_AJSLP-21-00115.

- Dhaliwal SS, Doyle PC, Failla S, Hawkins S, Fung K. Role of voice rest following laser resection of vocal fold lesions: A randomized controlled trial. *Laryngoscope*. 2020 Jul;130(7):1750-1755. doi: 10.1002/lary.28287.

- Whitling S, Lyberg-Åhlander V, Rydell R. Absolute or relative voice rest after phonosurgery: a blind randomized prospective clinical trial. *Logoped Phoniatr Vocol*. 2018 Dec;43(4):143-154. doi: 10.1080/14015439.2018.1504985.

- Björck G, Hertegård S, Ekelund J, Marsk E. Voice rest after vocal fold polyp surgery: A Swedish register study of 588 patients. *Laryngoscope Investig Otolaryngol*. 2022 Mar 16;7(2):486-493. doi: 10.1002/lio2.775.

- **Chi HW, Cho HC, Yang AY, Chen YC, Chen JW. Effects of Different Voice Rest on Vocal Function After Microlaryngeal Surgery: A Systematic Review and Meta-Analysis. *Laryngoscope*. 2023 Jan;133(1):154-161.**

Voice therapy

- Early
 - Sometimes avoids surgery
 - There is no obligation for surgery in benign lesions
 - Aesthetic surgery of voice, not of vocal folds!
- Pre-op
 - Improves the post-op outcomes

[Timing of Voice Therapy: A Primary Investigation of Voice Outcomes for Surgical Benign Vocal Fold Lesion Patients.](#)

Tang SS, Thibeault SL. J Voice. 2017 Jan;31(1):129.e1-129.e7. doi: 10.1016/j.jvoice.2015.12.005.

- Improves the compliance to the vocal rest if needed

[Role of Voice Therapy in Adherence to Voice Rest After Office-Based Vocal Fold Procedures.](#) King RE, Dailey SH,

Thibeault SL. Am J Speech Lang Pathol. 2021 Nov 4;30(6):2542-2553. doi: 10.1044/2021_AJSLP-21-00082.

Voice therapy

- Post-op

- Improves the vocal outcomes for phonotraumatic lesions

[The Role of Speech Therapy in Patients Who Underwent Laryngeal Microsurgery due to Phonotraumatic Lesions and Lesions Unrelated to Phonotrauma.](#) Macedo Cde A, Macedo ED, Malafaia O, Catani GS, Ido JM, Stahlke HJ Jr. Int Arch Otorhinolaryngol. 2014 Apr;18(2):132-5. doi: 10.1055/s-0033-1364204.

- Supposed to prevent treccurrence of phonotraumatic lesions

- Timing?

[Early Initiation of Voice Therapy After Microlaryngeal Surgery - A Randomized Control Study.](#) Raju T, Sargunraj JJE, Thejesh R, Paul RR, Albert RRA, Mathews SS. J Voice. 2022 Jan 2:S0892-1997(21)00418-5. doi: 10.1016/j.jvoice.2021.12.004.

Take home message

- Phonosurgery whatever the approach targets the sound of the voice
 - Not the aspect or shape of the vocal fold
- Adjuvant therapies are sometimes useful
 - Eradication of the pathophysiologic factors
- Voice rest is not mandatory
- E-cigarette may be interesting in peri-op
- See your patients early enough after surgery
 - to adapt adjuvant treatments



Thanks for your attention!

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