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The Vocal Overdoer Syndrome: A Useful Concept From the Voice Clinic

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INTRODUCTION

Laryngologists and speech pathologists can increase their diagnostic and therapeutic effectiveness through some knowledge of singing. In working with singers, for example, it is valuable for physicians and speech pathologists to know from personal experience what a voice lesson is like, what terms such as "support," "*passaggio*," and "*fach*" mean, what a dress rehearsal is, the rigors of a choir tour, the stress of solo singing while ill, and so forth. Reciprocally, voice teachers and their students may benefit from knowledge imported from the voice clinic. Those so armed (as many are today) are better equipped to assist the singer in vocal difficulty.

In this spirit of exchange of information, a diagnostic category termed the *vocal overdoer syndrome* (VOS)[1] can be of use not only in the voice clinic, but also in the singing studio. In both contexts, application of this idea can lead with surprising accuracy to a diagnosis of mucosal injury. In other words, the group of persons with nodules, polyps, or other overuse injuries almost invariably fulfill the criteria for the VOS. In addition, identification of the VOS in those who currently have no injury or symptoms can help them minimize the risk of future injury. Of course, voice teachers have long understood the dangers of vocal overuse. Use of the VOS construct converts this from a general idea to a specific, practical tool for the voice studio.

HOW IS THE VOS DIAGNOSED IN CLINIC OR STUDIO?

First—and most importantly—the clinician obtains a self-rating of the subject's innate degree of talkativeness—or propensity to talk. A simple way to do this is to ask him or her the following question: "On a seven-point scale of intrinsic talkativeness, where one represents a person of few words, four an averagely talkative person, and seven an unusually talkative individual, where would you place yourself?" Most people can place themselves on this scale accurately. Occasionally, however, the answer seems inaccurate based upon the questioner's observations. In such instances, it can be helpful to get permission to ask a friend or family member to validate the answer. Caveats: Some singers need help to distinguish between their innate talkativeness and that which is "imposed" by their job or other circumstances. Others avoid answering seven, because they wrongly suppose it to indicate obnoxiousness. If reluctance for this reason is suspected, "seven-ness" should be further defined in a positive way (e.g., "socially brilliant!") to remove any negative connotation. Based upon this simple self-rating of talkativeness alone, those who answer six or seven become preliminary candidates for the VOS.

The second part of the assessment concerns the individual's extrinsic opportunity and need to talk. A few minutes of basic questions about occupation, family communication style, child care responsibilities, hobbies, rehearsal and performance schedules, church and community involvement, social life, phone use, and so forth, are generally enough to get the picture. Sixes and sevens understandably select themselves into occupations / life circumstances that invite or require a lot of voice use. Only occasionally does a person who is less than a six fit the diagnosis of the VOS, as when his occupation is vocally extreme, for example, a stock trader. Beyond actual vocal commitments, persons with a high innate urge to talk may find or make their own opportunities to talk or

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sing any moment of the day—singing to themselves, using the phone recreationally, or even engaging strangers in conversation. When both the intrinsic propensity and the extrinsic opportunity or necessity to use the voice are high, the VOS is formally diagnosed.

THE VOS CORRELATES WITH RISK OF MUCOSAL INJURY

As hinted above, when the VOS is compared with many other threats to vocal fold health, it appears to correlate by far the best with acute and especially chronic injuries of the vocal fold mucosa (e.g., nodules, polyps, cysts, vascular abnormalities). That is, singers with chronic mucosal injuries such as those just mentioned are almost always vocal overdoers as defined above; by contrast, they may or may not have in common allergies, acid reflux, asthma, tobacco use, insufficient fluid intake, suboptimal voice production, or any other apparent cause of vocal problems. In fact, review of a large number of patients in the author's practice revealed that of all who met the criteria described here for the VOS (a selected population, to be sure), eighty percent were found to have a mucosal injury. The VOS is by far the strongest discernable commonality in this group. Lacking any better explanation, the VOS for now appears to be not only correlated with, but is also likely a primary cause of mucosal injuries.

The explanation for how being a vocal overdoer causes mucosal injury comes from understanding the mucosa and how it is injured. The mucosa is, of course, the wet, flexible surface tissue covering the vocal folds. As the main tissue that participates in vibration of the vocal folds, it is also the part most commonly injured by that very vibration, if it is "overdone" in various ways—amount, loudness (which incidentally often tends to the high side in vocal overdoers), pressed-ness, for example. Hence, the vocal "overdoing" may lead to acute or chronic vibratory mucosal injury. That is not always the case, however, as will be subsequently demonstrated.

USE OF VOS IN THE STUDIO

How can the voice teacher or singer make use of the VOS concept? The first way is to measure one's self against it. Where the VOS is present in the teacher him- or herself, self-diagnosis can be personally protective and instructive by subliminally introducing a bit of vocal prudence and increased self-awareness, as though a subconscious "word counter" were installed. The second is to teach students and colleagues how to use the VOS concept. Given its high correlation with mucosal injury, application of the above questions / procedures to find every case of the VOS might profitably be part of a first lesson, or as a small part of vocal pedagogy classes. Singers who thus are led to recognize the VOS in themselves may also experience helpful behavioral self-adjustment. Or, when a teacher detects ongoing upper voice limitations (delayed phonatory onsets, loss of upper range or pianissimi in that region of the voice) in a student who has an apparently normal speaking voice, or is approached because of vocal frustrations, assessment for presence of the VOS would be an important place to begin problem-solving.

OTHER QUESTIONS ABOUT THE VOS

How do you account for the fact that not all vocal overdoers have a mucosal injury?

Good question. A singer's brilliant personality may make him or her the life of every party. Yet, he or she continues to sing glorious high notes, even at pianissimo. This is because the genesis of nodules and other vibration-induced injuries is of course multifactorial. Physical constitution and manner and skill of voice production are just two additional pieces of the puzzle, not to mention the fact that there are degrees of the VOS. Nevertheless, vocal overdoers are worth identifying because, again, they appear to be the group most at risk for mucosal injury.

Don't you suggest anything beyond subconscious "prudence" for vocal overdoers?

Yes, vocal overdoers should work to avoid mucosal injury (or its furtherance) by optimizing the general measures of good vocal health so often written about. For example, spacing rather than massing voice use. Scheduling voice breaks into the day. Liberal, regular consumption of fluids. Attention to potential medical contributors such as allergy and acid reflux (which appear to be smaller contributors to chronic mucosal injury for most singers, as compared to the VOS). Ongoing training of voice production for both speech and singing so that phonation is efficient and "inexpensive" to the mucosa. Attention to the manner and amount of personal and social voice use. And perhaps even personal amplification

when teaching in large, acoustically unfriendly rehearsal spaces. In addition, one should make a habit of monitoring mucosal health by performing daily "swelling tests" which detect mucosal injury reliably, albeit with a few false positives.[2] Those used routinely at the Loyola Voice Institute can be used at home, too: ascending by half-steps with the first phrase of "Happy Birthday" sung at high frequency (above C_5) and low intensity; or a five-note descending staccato task. In the context of the VOS, a chronic tendency to huskiness, delayed phonatory onsets, and air escape, all of which increase in severity as one ascends the scale, should lead the singer to pursue a formal medical evaluation to confirm or rule out mucosal injury. Getting louder, even to piano, will often "make" the voice work, but this sort of concealment is not the idea. Insist on "boy soprano pianissimo" to "take the clothes off" the voice and to increase the sensitivity of the swelling tests.

And what if I or one of my "overdoer" students or colleagues fails the "swelling tests" and is later found to have a chronic mucosal injury? What would be done?

Most of all, don't despair. The ranks of those in this situation are large indeed, and help is available. First, however, an exact and comprehensive diagnosis is needed, employing the three tools of focused history, vocal capability assessment, and intense laryngeal examination, generally including laryngeal videostroboscopy. In the situation mentioned in this question, the primary diagnosis is generally the VOS. But what is the specific secondary (resultant) diagnosis? Are there nodules? An epidermoid cyst? A hemorrhagic polyp? Abnormally dilated capillaries? Is there even a tertiary (contributing) diagnosis such as acid reflux? When all of this is sorted out, the appropriate medical and/or behavioral and/or surgical options are applied. Medical optimization is usually the easy part. Behavioral management is the primary initial approach in light of the primary diagnosis of VOS. And when particular lesions do not respond to an appropriate trial of voice therapy, vocal fold microsurgery, performed expertly by an experienced surgeon, is extremely safe and voice-restoring.[3] In short, the question is rarely whether the singer can restore an excellent singing voice, it is instead exactly how will it be restored, and how long will it take?

SUMMARY

Formalized definition and use of a concept termed the "vocal overdoer syndrome" can help the voice teacher identify those individuals at high risk for development of chronic vocal fold mucosal injuries. It may be useful to teach this concept to students as well, for prevention, diagnosis, and treatment of these injuries.

NOTES

1. R. W. Bastian, C. Klitzke, and L. Thurman, "Vocal Fold and Laryngeal Surgery," *Bodymind and Voice* (Iowa City: The Voice Care Network, 1997), 416–427.

2. R. W. Bastian, A. Keidar, and K. Verdolini-Marston, "Simple Vocal Tasks for Detecting Vocal Fold Swelling," *Journal of Voice* 4, no. 2 (1990): 172–83.

3. R. W. Bastian, "Vocal Fold Microsurgery in Singers," *Journal of Voice* 10, no. 4 (1996):389–404.

Robert W. Bastian, M.D., received his medical degree from Washington University, St. Louis, in 1978. Thereafter he completed his internship in General Surgery and a residency in Otolaryngology—Head and Neck Surgery, also at Washington University. After four years as Assistant Professor at the same institution, he moved to Loyola University Medical Center in the Chicago area in 1987, where he currently serves as Professor of Otolaryngology—Head and Neck Surgery.

Dr. Bastian's work focuses exclusively on voice and swallowing disorders. He was one of the first to promote a team approach to these problems. Of particular interest to him are the medical, behavioral (voice therapy), and surgical treatments that can be applied to the problems of singers. As one part of a comprehensive treatment strategy, Dr. Bastian has to date operated on hundreds of singers with otherwise irreversible lesions. Other areas of notable interest and expertise include neurological voice disorders, including spasmodic dysphonia and larynx cancer. Dr. Bastian is also an accomplished singer.