

Guest Editorial

Role of Speech-Language Pathologists in Voice Therapy

Voice disorders refer to problems in voice production, primarily caused by disturbances or loss of normal laryngeal functions. They can result from a variety of pathological conditions. Voice therapy is defined as ‘an effort to return the voice to a level of adequacy that can be realistically achieved and which will satisfy the patient’s occupational, emotional and social needs’.⁴ It involves a patient-centered treatment method to modify vocal behaviors and eliminate voice misuse, manage voice disorders nonsurgically and allow for improved voice use and often recommended after a thorough examination of the vocal folds and assessment of the functional use of the voice.

Laryngologists and speech-language pathologists (SLPs) are the key members of a voice care team with varying roles. While laryngologists are responsible for bringing about changes in the aberrant voice either medically or surgically, SLPs work on modifying the faulty vocal behavior to optimal levels. It is now well-established that appropriate surgery helps to overcome many voice problems but could also lead to complications that worsen the voice. More often, laryngologists are confronted with patients whose voices have ‘worsened’ postoperatively. Voice therapy, though helpful in optimizing compensatory strategies and reducing vocal fatigue, may not always restore normal voice. Voice therapy, though often successful, requires active participation of the patient to bring about noticeable changes. Voice therapy, barring in specific conditions, is not a ‘quick fix’, the basic premise that needs to be understood by the patients who visit the laryngologist and get referred to SLPs. In the recent times, it is most heartening to note of increased interdisciplinary collaboration among laryngologists, SLPs and voice users themselves with proven results.

The past 25 years have yielded an impressive growth in our knowledge of vocal function. Interdisciplinary research cooperation in areas of laryngeal histology, vocal aerodynamics and acoustics, vocal fold vibratory characteristics, neurolaryngology and phonatory models has led to a clearer view of voice production. The importance of utilizing voice research to confirm traditional management techniques and to develop new physiologically based management approaches is being very much stressed.

Voice therapy begins subsequent to examination and diagnosis by a laryngologist. On referral, SLP analyses the voice in terms of the vocal behavior perceptually, acoustically or by both for a better understanding. The analysis includes subjective/perceptual assessment by the SLP and objective/acoustic voice analysis using a variety of instruments. Voice therapy usually involves strategies to eliminate three major determinants of voice disorders—vocal abuse, misuse and overuse. Therapy generally results in improvement in vocal quality, ease and endurance. In some cases, it may also result in the resolution of structural abnormalities, such as nodules. Voice therapy, in its basic form, is an attempt to train patients to modify their abusive/misused vocal behavior, requiring compliance to daily exercises. It requires that patients assume responsibility for their vocal behavior. The three key categories of any structured voice therapy program include awareness and implementation of vocal hygiene, decreasing trauma and increasing coordinated voice production. Indirect voice therapy includes educating the patient on the laryngeal mechanism functions, identifying the harmful causes and establishing realistic therapeutic goals. Direct voice therapy involves actively altering the patient’s speaking technique through various exercises and manipulations to increase vocal quality and vocal efficiency. The duration of direct therapy would depend on the condition and the changes brought out.

A lot of importance is given to vocal hygiene which is considered as the foundation of voice therapy. Patients are taught to take care of their vocal fold tissues by keeping them hydrated and by limiting laryngeal irritants. Best of voice therapy efforts start with the patient trained to take active control of his or her vocal health. Phonotrauma, (vocal abuse/overuse) a voice produced with too much effort for increased duration of time or at a high intensity, often results in organically based vocal fold pathology. Such vocal behaviors as screaming, yelling, throat clearing, vocalization during vigorous exercising, vocal overuse and speaking over background noise need to be eliminated. Further, increasing the coordinated vocal production is the crux of voice therapy. Achieving a good balance between respiration, phonation and resonance with optimal breathing, reduced laryngeal muscular tension, establishing optimal pitch and intensity has borne fruits in many dysphonic.

Although most of the patients benefit from a short stint of voice therapy, prolonged and direct voice therapy sessions are required for specific conditions, such as sulcus vocalis, severe Reinke’s edema, spasmodic dysphonia, vocal fold paralysis with severe glottal incompetence and secondary muscle tension dysphonia (MTD) with varying range of success.

Voice therapy is not ‘cookbook care.’ With advances in the practice of voice therapy, a number of voice therapy techniques have emerged which utilize various combinations of the techniques. However, the area is plagued by lack of evidence-based studies on their efficacy for specific conditions. Recently, acclaimed as efficacious by evidence-based studies are the following voice therapeutic strategies:

The accent method, originally developed by Smith and Thyme,¹ is reported to be beneficial in all types of dysphonia. The technique focuses on breathing as the underlying control mechanism of vocal output and uses accentuated and rhythmic movements of the body and then of voicing. Easy voice production with an open-throat feeling is stressed and attention is paid primarily to an abdominal/diaphragmatic breathing pattern. It is effective in benign lesions, MTD, vocal fatigue, paradoxical vocal fold motion and mild glottal incompetence.



Confidential voice, so described because it is the voice typically used to discuss confidential matters, is used to reduce vocal fold contact, thereby decreasing the force of vocal fold collision and reducing hyperfunctional behavior and muscle tensions. It is a breathy voice produced with slightly abducted vocal folds. The abduction results in increased airflow and reduced loudness. Although a breathy voice is not the final goal of therapy, it is encouraged for a prescribed period to promote mucosal healing. Confidential voice therapy has helped to eliminate phonotrauma, promote healing, eliminate excessive muscular activity and increase awareness of habitual loudness levels.

Various vocal facilitating techniques have been proposed by Boone et al,² which facilitate a ‘target’ or a more optimal vocal response by the patient. Part of the technique consists of finding the facilitating approach that results in the healthiest voice production and shaping that voice production into conversational speech.

Lee Silverman voice treatment is the most researched voice therapy protocol to date and developed to address the hypokinetic dysphonia most frequently associated with Parkinson’s disease.³ SLPs may also use manual laryngeal tension reduction (i.e. circumlaryngeal massage),⁴ useful in hyperfunctional/hyperkinetic dysphonics.

Resonant voice or voice with forward focus, usually refers to an easy voice associated with vibratory sensations in facial bones. Therapy focuses on the production of this voice primarily through feeling and hearing. The resonant voice reflects a relatively high-intensity glottal source spectrum yielding a loudness that is easily heard and intense oral air pressure variations that result in the vibratory sensations. Resonant voice is produced with the vocal folds in a barely adducted posture and described as being useful in the treatment of vocal fold lesions, functional voice problems, mild vocal atrophy and paralysis. Treatment lasts for 8 to 12 sessions. In active use are resonant/frontal focus voice therapy, initiated by having patients’ hum on nasal sounds (M, N, NG) and prolonging voiced fricatives (z, v).

Vocal Function Exercises

In the 1950s, Briess described identification and treatment of specific laryngeal muscle dysfunction. More recently, Stemple et al⁵ popularized a series of vocal function exercises, a series of systematic vocal manipulations for the vocal folds, intended to strengthen and balance the laryngeal musculature and to improve the efficiency between the interaction of airflow, vocal fold vibration and resonance. In that the exercises are designed to pinpoint and exercise-specific laryngeal muscles, they embody a physical therapy approach. The four steps address warm-up of the muscles, stretching and contracting of muscles, and building muscle power. The softness of the productions is said to increase muscular and respiratory effort and control. The exercises are recommended for use with most types of voice disorders for a 6 to 8-week course.

The need for appropriate voice change in transgender population, though realized and well-established in the west, is now being addressed in the Indian context. The change of sex from female to male does not present concerns about voice owing to the drugs administered that effectively cause permanent virilization of the larynx with a lowering of pitch but is of concern in male to female trans-sexual. The voice of the clinician needs to, in addition to increasing the pitch, attend to vocal softness, intonation patterns, length of utterance, linguistic differences and differences in body language and gestures accompanying speaking. Attempts to change pitch should be made judiciously so that the individual does not suffer vocal strain and fatigue and does not sound artificial.

The treatment of spasmodic dysphonia has received widespread interest since the use of botulinum toxin (Botox). It has been reported that voice therapy following botulinum toxin administration results in less effort in phonation over a longer period than treatment with botulinum toxin alone.

Assuming an appropriate referral, the success of voice therapy hinges on stimulability (elicitation of a better-sounding and healthier voice), motivation, compliance with voice therapy-based exercises after the therapy sessions at the home set up, appropriate goals and other factors like emotion, personality, stress and anxiety.⁶

In spite of the increased evidence-based reports of the efficacy of voice therapy in the recent times, paucity of prospective, randomized clinical trials concerning voice therapy efficacy, the answer to what connotes success in voice therapy is driven more by expert opinion rather than data. Laryngologists, SLPs and patients are witness to the success of voice therapy. Much-needed efficacy studies are under way to verify the anecdotal success of voice therapy.

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