Voice Therapy Methods

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Lecture Objectives:

To explore …

* Anatomy,
* Physiology,
* Assessment,
* Management,
* Prognosis
* Referrals

of Voice Disorders.

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Management of Voice Disorders:

- ✓ **Voice therapy.**
- ✓ **Phonosurgery.**
- ✓ **Drugs.**
- ✓ **Technical aid devices.**

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Voice Therapy

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Behavior re-adjustment voice therapy (BRAT):

Entails 2 main tasks:

A. Vocal hygiene advice (Chapter 7).

B. Voice Therapy (Chapter 8).

A. Vocal hygiene advice:

- ✓ To provide a “larynx friendly” environment.
- ✓ Addresses diet, lifestyle, and vocal demands.
- ✓ The patient has to learn his/her limits and operate within them.
- ✓ The concept of “vocal finances”.

نصائح المحافظة على الصوت:

أولا: لاتفعل مايؤذى صوتك وتجنب الآتى:

- ✓الصراخ والكلام بصوت عال.
- ✓الكلام من مسافات بعيدة.
- ✓الكلام في الضوضاء.
- ✓الكلام لعدد كبير من المستمعين مع عدم استخدام مكبر للصوت.
- ✓كثرة الكلام في وجود التهاب بالحنجرة.
- ✓كثرة النحنحة والكحة الشديدة.
- ✓الضحك والبكاء بصوت عال.
- ✓الكلام بسرعة وبدون أخذ النفس الكافى.
- ✓التدخين أو مخالطة المدخنين.
- ✓تناول الكحوليات.
- ✓تناول الأكلات الحراقة.
- ✓الإكثار من المشروبات التي تحتوي على الكافيين، مثل الشاي والقهوة والكولا.

نصائح المحافظة على الصوت:

ثانيا: افعل ما يحافظ على صحة وسلامة صوتك:

- ✓شرب كمية كبيرة من السوائل بمعدل ثلاثة لترات يوميا.
- ✓استعمال مرطبات الجو عند الحاجة.
- ✓استخدام اشارات من أجل لفت نظر من هو على بعد، بدلاً من استخدام الصوت العالى.
- ✓تقليل الضوضاء فى البيئة المحيطة قدر الامكان قبل تبادل الحديث، أو أن تكون قريبا ممن تتحدث معه.
- ✓علاج نزلات البرد والسعال.
- ✓استخدام طبقة الصوت الطبيعية وعدم التكلف في إخراج الصوت.
- ✓استخدام مكبر للصوت للحديث في مكان مفتوح.
- ✓منح الصوت فترات من الراحة قدر الأمكان على مدار اليوم، وخصوصا عند التعرض لنزلة برد أو ارهاق.
- ✓الاعتدال في مدة استعمال الصوت وشدته.
- ✓المبادرة باستشارة طبيب التخاطب والصوت عند استمرار البحة لأكثر من أسبوعين.

A. Vocal hygiene advice:

- ✓ Vocal hygiene advices in the first and second sessions of voice therapy.
- ✓ If difficulty with compliance to these advices, prognosis in voice therapy is guarded.

B. Voice therapy:

- ✓ The patient is most important member of the team – the patient must be motivated to participate.
- ✓ Voice therapy should be tailored to accommodate the patient's professional, career, and daily goals.
- ✓ The concept of "Trial Therapy".

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B. Voice therapy (cont):

- ✓ It is the patient's responsibility to:
  - attend sessions.
  - complete home practice.
  - work to carry over efficient voice use in everyday life.
- ✓ Patient education (anatomy, physiology, causes, treatment options, …..).
- ✓ Realistic patient expectations.

B. Voice therapy (cont):

- ✓ Voice therapy is not "cookbook care."
- ✓ Each patient presents with individual needs.
- ✓ Some therapies work better with some patients than others.

B. Voice therapy (cont):

- ✓ Not all patients are appropriate patients for voice therapy.
- ✓ Voice therapy begins with an accurate diagnosis and referral from an otolaryngologist.
- ✓ The ENT diagnoses the voice disorder, and the SLP evaluates the vocal behavior while determining stimulability for improvement.

B. Voice therapy (cont):

Causes of failure of voice therapy:

1. Inappropriate referral from ENT.
2. Not stimulable for a better voice.
3. Decreased motivation for change (i.e., wants a "quick fix").
4. Non-compliant to vocal hygiene advices.
5. Will not accept responsibility.

B. Voice therapy (cont):

Causes of failure of voice therapy (cont.):

6. Hearing loss.
7. Possible concomitant emotional or psychological problems.
8. Accurate referral to an inexperienced speech-language pathologist.

Voice therapy methods:

I. Specific methods.

II. Diverse methods.

III. Holistic methods.

Voice therapy methods:

I. Specific methods:

1. Paralytic dysphonia (pushing technique).

2. Mutational dysphonia (finger manipulation and pressure).

3. Psychogenic aphonia (cough, hum, masking..).

Voice therapy methods (cont.)

II. Diverse methods:

1. Relaxation.
2. Altering tongue position.
3. Pitch inflection.
4. Yawn-sigh.
5. Head rolling.
6. Laryngeal massage.
7. Inhalation phonation.
8. Chant talk.

Voice therapy methods (cont.)

III. Holistic methods:

Tackles respiratory, pulmonary, and articulatory mechanisms.

Accent Method

(Smith & Thyme, 1978; Kotby, 1995).

Indications

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Indications:

1- **Disorders of Voice.**

2- **Disorders of Speech:**

a- **Dysarthria**: Correcting defective breathing, dysprosody, and dysphonia.

b- **Stuttering**: Improving breath control leading to better phrasing and rhythms.

3- **Disorders of Language:**

Correcting **dysprosody** in selected language disorders in children and adults.

Indications:

Disorders of Voice:

I. Mainstream of therapy:

1. Non-organic voice disorders.
2. Some benign vocal fold lesions.
3. Some organic voice disorders.

Indications:

Disorders of Voice (Cont.)

II. Complementary line of therapy:

1. Pharmacotherapy.

2. Phonosurgery.

Tecniques

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(1) Accent Method Voice Therapy:

Described earlier.

(2) Confidential Voice Therapy:

It is used to reduce the force of vocal fold collision and excessive laryngeal hyperfunction during phonation.

A breathy voice produced, but it is not the final the therapeutic goal.

It is encouraged for a prescribed period to promote mucosal healing.

Confidential Voice Therapy:

It is only used for a period of time to promote vocal fold healing.

Once that period is finished, the voice production is shaped into a healthy vocal production by other therapies.

(3) Facilitating Techniques:

Originally described by Boone et al.

These techniques were thought to facilitate a “target” vocal response by the patient.

There are 25 facilitating techniques in total *

They may be used individually or in any combination to modify deviant vocal symptoms.

(4) Inspiratory muscle strength training (IMST):

Described by Christine Sapienza.

She developed a device that consists of a mouthpiece with a one-way valve. The valve blocks airflow until the threshold pressure is produced to overcome the spring force.

Inspiratory muscle strength training (IMST):

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Inspiratory muscle strength training (IMST):

The patient must generate sufficient inspiratory pressure using inspiratory musculature to open the valve and allow the air to flow.

IMST has shown to be successful in a case of a patient with bilateral abductor vocal fold paralysis and a patient with paradoxical vocal fold motion.

(5) Lee Silverman Voice Treatment:

LSVT was developed to address the hypokinetic dysphonia most frequently associated with Parkinson disease.

LSVT is a systematic voice therapy approach that focuses on increasing loudness during four sessions per week for 4 weeks.

Lee Silverman Voice Treatment:

Patients are trained to "recalibrate" their habitual speaking volume to one louder because the loudness that they think is normal is, in reality, too quiet.

Having patients use a very loud voice also improves their articulatory precision and inflection.

The efficacy of this treatment has been well-researched.

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Lee Silverman Voice Treatment:

There is a modified version of LSVT called pitch limiting voice treatment (PLVT).

It requires patients to voice in a low and loud pitch to increase loudness and speech intelligibility.

(6) Manual Circumlaryngeal Techniques:

They are direct hands-on approaches in which the larynx is repositioned during phonation while observing changes in voice.

May be useful in hyperfunction (MTD).

Symptoms of excessive laryngeal muscle tension are usually: neck tenderness, soreness, and tightness.

Focal areas of tenderness are felt and manipulated.

Manual Circumlaryngeal Techniques

There are three laryngeal reposturing maneuvers:

(a) “push-back” maneuver,

(b) “pull-down” maneuver, and

(c) medial compression and downward traction.

Manual Circumlaryngeal Techniques

Moments of voice improvement are identified, shaped, and reinforced with manual laryngeal manipulations (i.e., digital cueing).

Then, the digital cues are faded while the patient learns to rely on vibrotactile, kinesthetic, and auditory feedback to maintain improved voice.

(7) Circumlaryngeal Massage:

This is elaborated by Morrison and Rammage .

It differs from manual circumlaryngeal techniques because rather than reposturing the laryngeal mechanisms, direct massage to the laryngeal area is done.

Circumlaryngeal Massage:

It is achieved by placing the thumb and forefinger over the tips of the hyoid bone while using circular motion to massage inferiorly to the thyrohyoid space and posterior borders of the thyroid cartilage.

(8) Resonant Voice Therapy:

The Lessac-Madsen resonant voice therapy (LMRVT) is probably most well-known of this type.

It is initiated by having patients hum on nasal sounds (m, n, ng) and prolong voiced fricatives (z, v).

Eight weekly therapy sessions are prescribed.

Resonant Voice Therapy:

The target is "barely adducted" or "barely abducted" vocal fold configuration, facilitated by the use of "resonant voice," which is defined as "easy" voice production with anterior oral vibrations.

May be used with patients who have hyperfunctional voice disorders (e.g., MTD).

(9) Respiratory Retraining Therapy:

Described by Florence Blager.

It consists of inhaling through the nose with a relaxed tongue posture and prolonging audible exhalation through pursed lips or by producing an /s/.

Extra attention is paid to exhalation.

Respiratory Retraining Therapy:

Nasal inhalation encourages wider glottal abduction.

Patients are instructed to pay attention to exhalation and overall relaxation.

It is mostly used with patients diagnosed with paradoxical vocal fold movement disorder (PVMD).

(10) Stretch and Flow Phonation:

Developed by Stone and Casteel.

It focuses on airflow management.

Many patients present with breath-holding tendencies that are either the cause of their voice problems or maladaptive compensatory responses.

Stretch and Flow Phonation

It has five skill levels. Each skill is used in a hierarchy of different speaking situations (e.g., from sustained sounds to repeated words up to conversational speech).

Used with patients with functional aphonia, MTD, and in patients who have developed maladaptive compensatory muscle tension.

(11) Vocal Function Exercises:

Briess developed these techniques. More recently, Stemple et al. adapted this therapy program into a series of vocal function exercises (VFEs).

VFEs are a series of systematic vocal manipulations, similar in theory to physical therapy for the vocal folds.

Vocal Function Exercises:

There are four steps to the program:

(a) vocal warm-up by sustaining the vowel “ee” for as long as possible.

(b) stretching of the laryngeal muscles by gliding from the lowest note to the highest note.

(c) contracting of the laryngeal muscles by gliding from the highest note to the lowest note.

(d) building muscular power by sustaining musical notes for as long as possible.

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Vocal Function Exercises:

The exercises are performed two times each, and are repeated twice a day.

The exercises are to be done softly without excess strain.

VFEs may be used on patients with benign vocal fold lesions, mild glottal incompetence, and MTD.

Thank You

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