

# Evaluation of Voice Disorders

- \* Proper treatment can be given only if the correct cause of the voice disorder is identified.
- \* If the voice disorder is caused by more than one cause, pinpointing all causes is critical for mapping out a comprehensive, effective treatment plan. Partial treatments will not be effective and will result in only partial or no improvement of the voice disorder.
- \* Goals of taking history[1]:
  - 1) Establish the chronological history of the problem
  - 2) Seek etiologic factors associated with the history
  - 3) Determine patient motivation for resolving the problem
  - 4) Helps us determine if referral to other professionals is appropriate
  - 5) Provides information necessary to make a reasonable prognosis
  - 6) Provides information regarding possible approaches to treatment
- \* The three major objectives of the diagnostic voice evaluation are to:
  - Identify the causes of the voice disorder,
  - Describe the present vocal components, and
  - Develop an individualized management plan.

## History Taking:

### **The chief complaint:**

- \* It is the voice problem that the patient is experiencing → Hoarseness – Harshness – Breathiness – Throat clearing – Vocal fatigue – Pain in the throat
- \* Why are you here?!!

### **History of present complaint:**

- Describe how it is occurred
- When did you first noticed your difficulty or changes in voice
- How long it has lasted
- How often it happens
- What usually triggers the voice problem
- What helps the patient overcome the voice problem
- Is it better in the morning than in the evening or vice versa?
- Have you ever lost your voice totally?
- \* Do you have any occasion to raise your voice, to talk over noise, or to shout?
- \* How much does this problem actually bother you? Is it causing any daily problems at home or on your job?
- \* What is your interest in pursuing voice therapy
- \* Patients should be asked about laryngeal sensations because common symptoms associated with voice disorders include throat dryness, tickling, burning, aching, lump-in-the-throat, or thickness sensations
- \* H/O associated swallowing difficulties
- \* We need to ask the patient if his/her voice is affected during menstrual, emotional (angry) state, etc.

## Family history of voice problem

### Past medical history:

- \* Past surgeries and hospitalizations.
- \* Use of medications
- \* Smoking, alcohol, and drug use history

### Social History

Goals: (1) Develop knowledge of the patient's home, work, social, and recreational environments; (2) discover emotional, social, and family difficulties; (3) seek additional etiologic factors[1].

- \* Are you married, single, divorced, or widowed?
- \* Do you have children? What are their ages? How many are they at home?
- \* What kind of work do you do? Specifically, what do you do in your job?
- \* How much talking is required and how much is social?
- \* When you are not working, what do you enjoy doing (i.e., clubs, hobbies, groups, organizations, sports, other social activities.)
- \* Tell me about the environment that you live in or work with where you are possible in contact with dust, fumes, chemicals or paints.
- \* When you have a lot of stress or tensions, who helps you or takes care of you?

## Behavioral Voice Assessment:

- \* Subjective impression of vocal quality
- \* Non-phonatory behaviors (Breathing pattern)
- \* Rating scales

## Medical Physical Examination:

### General examination:

#### Head and neck examination →

- Observing posture and neck muscle tension
- Lymph nodes
- Thyroid
- Neck masses
- Check for swallowing difficulties

#### Chest examination

#### Functional Voice Assessment →

- Oral-peripheral examination
- Laryngeal examination →
  - Indirect laryngoscopy → visualize the larynx
  - Fiberoptic laryngoscopy
  - Video Stroboscopy
- Voice Instrumental Assessment[2] →

- Acoustic analysis → Instrumentation available for acoustic analysis includes: Visi-Pitch and CSL (Computerized speech lab), and Dr. Speech.
- Aerodynamic assessment → *Aerophone* and *Phonatory Function Analyzer*.
- Voice quality: Spectrograph is used to measure breathiness, harshness, and hoarseness, which converts audible signals into printed, visible traces

### **Non instrumental voice assessment:**

- Pitch range
- Maximum phonation time (MPT)
- s/z ratio
- Speaking rate: Speaking rate may be assessed during speaking or reading and is reported in either words per minute (WPM) or syllable per minute (SPM)[2]
  - Normal speaking rates for adults (115-165 WPM or 162-230 SPM)
  - Normal reading rates for adults (210-265 SPM)

## **Report writing.**

## **Recommendations**

## **Work cited**

1. Stemple, J.C., L. Glace, and P.B. Klaben, *The diagnostic voice evaluation*, in *Clinical Voice Pathology: Theory and Management*. 2000, Singular Publishing Group: San Diego, CA. p. 149-178.
2. Schwartz, S.K., *The source for voice disorders adolescent and adult*. 2004, Moline, IL: LinguiSystems, Inc.