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:
  o Identify the causes of the voice disorder,
  o Describe the present vocal components, and
  o 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:

  o Describe how it is occurred
  o When did you first noticed your difficulty or changes in voice
  o How long it has lasted
  o How often it happens
  o What usually triggers the voice problem
  o What helps the patient overcome the voice problem
  o Is it better in the morning than in the evening or vice versa?
  o 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, ticking, 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, dimes, 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)
  - 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**