Quality of Life Tools: What do they tell us?

Clark A. Rosen MD, FACS
University of Pittsburgh
Voice Center
voicecenter.upmc.com
ROSENCA@UPMC.EDU

Outcomes Measures

- Traditional
  - Physical (Kaplan-Meier, Bone density, ...)
- Quality of Life Movement
  - Patient-based focus
  - Whole organism
  - Function-based

Outcome Measures (2)

- General Function/Overall
- SF-36
- Disease or Function-Specific
  - Chronic Sinusitis
  - Low Back Pain
  - Laryngology
    - Dysphagia
    - Voice
    - Airway
Voice, Patient-based Measures

- Voice Handicap Index (VHI)
- Voice-Related Quality of Life (VR-QOL)

- Voice Outcome Survey (1999)
- Voice Activity and Participation Profile (2000)
- Vocal Performance Questionnaire (1999)

Voice Handicap Index (VHI)

- Designed to measure patient’s perception of handicap due to voice problem
- Reliable
- Quantifiable
- Developed and tested with a wide variety of voice disorders

Voice Handicap Index (VHI)

- 30 questions filled out by patient
- Each question scored from 0 to 4
- Total Score ranges from 0 to 120
- Higher the Score, the Greater the Perceived Handicap due to the Voice Problem
- 3 Domains
  - Functional, Physical, Emotional
  - These domains are not independent factors
- There is no such thing as a functional, physical or emotional voice handicap score

VHI - Research

- Jacobsen/Benninger
  - VHI Development (1997)
  - Pre/Post Treatment (1999)
- Rosen/Murry
  - VHI in Singers versus Non-Singers (1999)
  - Changes of VHI Following Treatment (2000)
  - Development of the VHI-10 (2000)
- Courey et al
  - VHI changes after Botox for SD (1999)
- Pubmed for VHI = 361 citations
An Improved Outcomes Instrument for Voice Disorders
VHI-10
Clark A. Rosen MD
James Osborne, BS
Bhavna Patel, BS
Thomas Zullo, PhD
Thomas Murry, PhD
University of Pittsburgh
Voice Center
www.upmc.edu/upmcvoice

VHI -10 Versus VHI

Methods
- Initial Presentation (study group I vs control)
- Pre/Post Treatment(s)
- Relationship to Acoustic Analysis of Phonation

No loss of statistical power when VHI - 10 compared to VHI
- Duplicated topics removed
- Mis-leading questions removed
- Less patient burden

Laryngology Symptom Instruments
- Reflux Symptom Index (RSI)
- Reflux Finding Score
- Singing Voice Handicap Index
- SVHI-10
- Dyspnea Symptom Index (DI)
- Cough Symptom Index (CSI)

Validity and reliability of the reflux symptom index (RSI)
Belafsky PC, Postma GN, Koufman JA.
J Voice. 16(2):274-7 2002

| TABLE 1: Reflux Symptom Index (RSI) | 5 = almost always 1 = never
|------------------------------------|----------------------
| 1. Frequent or a problem with your voice | 0 1 2 3 4 5 |
| 2. Coughing your throat | 0 1 2 3 4 5 |
| 3. Sore throat, hoarse or constant drip | 0 1 2 3 4 5 |
| 4. Difficulty swallowing food, liquids, or pills | 0 1 2 3 4 5 |
| 5. Coughing after you eat or when lying down | 0 1 2 3 4 5 |
| 6. Sneezing or effective or strange sensations | 0 1 2 3 4 5 |
| 7. Nasal discharge or anything in your nose or a lump in your throat | 0 1 2 3 4 5 |
| 8. Sensation of something sticking in your throat or a lump in your throat | 0 1 2 3 4 5 |
| Heartburn, chest pain, indigestion, or stomach acid coming up | 0 1 2 3 4 5 |

The mean RSI in patients with LPR was 21.2 vs. 11.6 in controls
After 6 months of PPI therapy their RSI approached controls
Reflux Symptom Index (RSI)

- High Sensitivity
- Low Specificity
- Good if the score is above 20 or below 10
- Between 10-20 ??
- Two-three scores of “5” can result in misleading result
- Best to evaluate pattern and nature of responses

Assess Breathing and Cough?

- Dyspnea Index (DI)
  - Aimed at upper airway related diseases
    - PVFMD
    - Glottic/Subglottic stenosis
    - Lower airway disease not excluded
- Cough Severity Index (CSI)
- Two 10-item questionnaires

Reflux Symptom Index (RSI)

<table>
<thead>
<tr>
<th></th>
<th>Within the last MONTH, how did the following problems affect you?</th>
<th>0 = no problem</th>
<th>5 = severe problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Hoarseness or a problem with your voice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Clearing your throat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Excessive throat mucous or postnasal drip</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Difficulty swallowing food liquids or pills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Coughing after you ate or after lying down</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Breathing difficulties or choking episodes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Trouble or annoying cough</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Sensations of something sliding in your throat or a lump in your throat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Heartburn, chest pain, indigestion, or stomach acid coming up</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Development and Validation of the Singing Voice Handicap-10

Seth M. Cohen, MD, MPH
Melissa Statham, MD
Clark A. Rosen, MD
Thomas Zullo, PhD
SVHI-10

- Cohen et al
- Laryngoscope 2009
- Reliable
- Valid
- Measure patient-perceived impact of singing voice problems

Pearls and Caveats

- Patient Must Answer Honestly
  - Please the Provider (PC)
  - Personal Agenda (legal, …)
  - Send a message
- Global assessment tools and may not fit the needs of every patient/voice problem
- Must stay aware of limitations of each instrument
- It is only ONE component of your evaluation and treatment
- Interpret with Caution regarding:
  - Duration of Voice Disorder
  - Occupation and Social Voice Demands

Patient-based Voice Measures

- Quantifies Patient Perception
  - Voice +/- Laryngologic problems
- Inexpensive
- Expedient
- University of Pittsburgh Voice Center
  - New and return patients
  - VHI-10 and RSI
  - If singer, SVHI-10
  - If having breathing or cough problem,
    - Dyspnea Index (DI)
    - Cough Severity Index (CSI)