Factors Characterizing TMJ Disorders: A Survey of Affected Individuals

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Objectives

1. Describe a recent survey of individuals registered with the TMJ Association

2. Present selected findings from that survey

3. Provide a perspective of the implications of survey findings
Purpose

To obtain preliminary information on the past experiences of patients with TMJ disorders
Methods

- Developed survey instrument
- IRB approval for data collection/analysis
- Emailed invitation to participate to TMJ Association registry participants
- Obtained informed consent
- Web based questionnaire completed without personal identifiers
Questionnaire Focus

- Demographic information
- Perceived causes of TMJ
- Pain
- Symptoms
- Quality of life
- TMJ treatments and outcomes
- Co-morbid conditions
Selected Findings
Participation

- 10,000 emailed invitations
- Estimated 3,500 individuals received the email based on a subsequent telephone sub-sample survey
- 1,540 responses
  - Estimated 43% of those receiving the survey responded
- 96.4% had been diagnosed with TMJ
- Many respondents reported emotional distress in completing the survey
Respondent Characteristics

- 90% women
- 96% non-Hispanic white
- 79% college graduate or higher
- Average age: 40.8 years
  - Age at first symptoms: 25.4 years
  - Age at diagnosis: 29.5
- 70% employed
- Marital status
  - 57% married
  - 29% never married
  - 12% divorced
Perceived Causes of TMJ Disorders

- **Unknown**
- **Heredity**
- **Orthodontics**
- **Arthritis**
- **Dental**
- **Stress**
- **Clenching**
- **Trauma**

**Professional**

**Personal**

Told by Health Care Professional

Personal Opinion

Overlap

Percent
Prevalence of Selected Co-morbid Conditions

- Trigeminal Neuralgia: 7.7 ***
- Teeth Breaking: 1.7 *
- Swallowing Difficult: 3.3 **
- Migraines: 1.1
- Tension headaches: 1.0
- Fibromyalgia: 4.4 **
- Fatigue: 2.3 **
- Ears Ringing: 2.2 **
- Allergies: 0.3 **

*OR = Odds of occurrence after TMJ Dx. compared with before
Respondent report of TMJ-related pain in the past 4 weeks

- None: 6.0%
- Mild: 31.3%
- Moderate: 37.0%
- Severe: 25.6%
Occurrence of TMJ-Related Pain by Time of Day

- Morning
- Mid-Day
- Evening
- Night
- Off & On
- N/A
Pain interference with activities in past 4 weeks

<table>
<thead>
<tr>
<th>Level</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>23.8</td>
</tr>
<tr>
<td>Some</td>
<td>31.7</td>
</tr>
<tr>
<td>Moderate</td>
<td>20.9</td>
</tr>
<tr>
<td>Severe</td>
<td>23.6</td>
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</tbody>
</table>
Personal behaviors used to relieve TMJ pain

- Do you smoke to alleviate pain of TMJ?
- Have you used alcohol to alleviate pain of TMJ?
- Have you used recreational drugs to alleviate pain of TMJ?

Percent of Respondents
Experience with obtaining pain medications

- Difficult: 37.8%
- Easy: 32.2%
- Impossible: 12.1%
- NA: 17.8%
Current Use of Selected Classes of Medications by Respondents

- Anti-depressant
- Anti-anxiety
- Narcotics
- OTC Pain Relievers
- Anti-inflammatory
- Muscle Relaxants

Percent of Respondents
Perceived Effectiveness of Therapies

Most Effective

- Hot or cold compresses
- Jacuzzi or hot bath
- Craniosacral therapy
- Chiropractic therapy
- Accupressure
- Botox injections
- Flat-plane /stabilizing splint
- Accupuncture
- Light therapy
- Electro-simulation
- Biofeedback
- Jaw exercises
- Cortisone injections
- Magnabloc injections
- Aqua flow mouth piece
- Elastic mandibular advancement appliance
- Aroma therapy
- Bridgework
- Dentures
- Magnetic therapy
- Equilibration (teeth ground down)
- Facial flex

Least Effective

CAUTION
Frequency of Bilateral Joint Surgeries
Of Individuals Who Have Had Surgery (19.4%)

Total respondents that had surgery = 284 (19.4% of respondents)
Advantages

- Availability of TMJ registry
- Opportunity to learn from affected individuals
- Involvement of multidisciplinary investigators
- Low cost
- Preliminary information for focus of future research
Survey Limitations

- Self-selected target population
- Low receipt rate of emailed questionnaire
- Relatively low response rate
- Diagnosis by self-report
- Respondents may not be representative of TMJ registry participants
- No control group
- Cross sectional study
Some unanswered questions raised or reinforced by the survey?

- What is the natural history of TMJ?
- What are the outcomes of various therapeutic interventions?
- What are the characteristics of individuals who present with TMJ?
- What are the risk factors for TMJ?
- What is the knowledge, attitudes and beliefs of professionals with regard to TMJ?
What do we need to answer these questions?

- Registry of incident cases under medical care submitted by health care providers
- Standardized criteria for diagnosis
- Longitudinal follow-up of a cohort of TMJ patients
- Appropriate controls
- Survey of professional practices regarding TMJ