

Oral symptoms and oral function in people with Sjögren's syndrome

Sirs,

Saliva is essential for oral health and oral function including oral lubrication, oral clearance and tissue maintenance (1-4). Autoimmune disorders, such as Sjögren's syndrome (SS), are common causes of hyposalivation possibly leading to further oral and other health complications. We conducted a survey of people with SS in conjunction with the Sjögren's Syndrome Foundation to assess the severity of oral symptoms, oral function and quality of life in people with SS. One hundred and fifty-one subjects completed informed consent and a survey rating their common oral symptoms from zero (no symptoms) to 10 (most severe symptom), based upon the Vanderbilt Head and Neck Symptom Survey (5). The sample was primarily female (96%) and the mean age was 65.8±11.5.

Subjects reported experiencing many oral symptoms with the highest rated symptoms involving dry mouth (Table I): problems with dry mouth ($x=7.6\pm2.1$, 78.5% in the severe group), lining of mouth/throat is sensitive to dryness ($x=6.6\pm3.0$, 56.8% in the severe group), food sticking in mouth due to dryness ($x=5.9\pm3.4$, 50.7% in the severe group), problems with dry mouth affecting chewing/swallowing ($x=5.7\pm2.9$, 44.6% in the severe group), problems with dry mouth affecting speech ($x=5.3\pm3.1$, 44.2% in the severe group), problems with dry mouth affecting sleep ($x=4.8\pm3.3$, 35.4% in the severe group) and food sticking in the throat due to dryness ($x=4.7\pm3.2$, 36.1% in the severe group). Additional oral symptoms related to eating were trouble eating certain solid foods ($x=6.0\pm3.4$, 49.3% in the severe group) and sensitivity in lining of mouth/throat ($x=5.9\pm3.5$, 53.4% in the severe group).

Some subjects rated medications hard to take due to dry mouth ($x=2.7\pm3.1$, 65.2% in the mild group). Weight loss problems were minimal despite report of dry mouth. Trouble with dentures ($x=3.8\pm3.8$, 33.3% in the severe group) was rated as somewhat problematic, while other oral care complications such as burning pain in lining of mouth/throat prevents brushing of teeth ($x=0.8\pm1.9$, 91.0% in the mild group) were not problematic.

Subjects were asked to rate their worst pain and average pain over the last week and the mean worst pain was 3.3±3.3 and the average pain mean was 2.9±2.8 with 19.6% and 15.1% in the severe group, respectively. Burning pain in the lining of mouth/throat changes food choice ($x=4.1\pm3.9$, 35.9% in the severe group) and painful sores in mouth/throat ($x=3.0\pm3.4$, 20.9% in the severe group) were moderately problematic. Mouth/throat pain causing difficulty

Table I. Baseline oral symptoms by severity stratification of mild, moderate and severe.

	Mean sample score (mean±SD)	Percentage reporting mild symptoms (0-3)	Percentage reporting moderate symptoms (4-6)	Percentage reporting severe symptoms (7-10)
Problems with dry mouth	7.6±2.1	5.4	16.1	78.5
Problems with dry mouth make chewing and swallowing hard	5.7±2.9	26.4	29.1	44.6
Problems with dry mouth affect ability to sleep	4.8±3.3	40.8	23.8	35.4
Problems with dry mouth affect ability to talk	5.3±3.1	32.7	25.2	42.2
Thick saliva (mucous or phlegm)	4.3±3.5	48.6	15.8	35.6
Lost weight due to dry mouth affecting eating habits	1.6±2.8	81.6	9.5	8.8
Trouble maintaining weight due to swallowing problems	0.9±2.3	89.9	4.1	6.1
Trouble eating certain solid foods	6.0±3.4	29.1	21.6	49.3
Food gets stuck in mouth due to dryness	5.9±3.4	29.1	20.3	50.7
Food gets stuck in throat due to dryness	4.7±3.2	41.5	22.4	36.1
Great effort to swallow due to dry mouth	3.8±3.0	53.1	23.1	23.8
Painful sores in mouth or throat	3±3.4	62.2	16.9	20.9
Hard to take medications due to dry mouth	2.7±3.1	65.5	18.2	16.2
Mouth or throat pain causes difficulty speaking	2.6±3.1	68.2	16.9	14.9
Average mouth pain level over the last week	2.9±2.8	65.1	19.9	15.1
Worst mouth pain level over the last week	3.3±3.3	57.4	23.0	19.6
Pain causes difficulty sleeping	2.1±3.1	74.1	12.2	13.6
Trouble speaking	3.7±3.0	53.4	25.7	20.9
Voice is hoarse	4.3±3.0	45.6	27.9	26.5
Trouble being understood due to speaking or hoarse voice	2.8±3.0	67.3	15.6	17.0
Trouble wetting/softening food due to dry mouth	3.9±3.4	57.1	15.0	27.9
Taste is altered or reduced	4.2±3.4	48.3	20.7	31.0
Less desire to eat due to taste change	2.3±3.1	73.1	12.4	14.5
Chosen foods to eat altered due to taste changes	3.1±3.5	64.8	11.0	24.1
Decrease in food eaten due to taste changes	2.2±3.1	75.9	9.7	14.5
Difficulty chewing due to teeth/dentures	2.8±3.3	64.4	15.3	20.3
Teeth are sensitive to hot/cold/sweet foods	4.3±3.7	51.1	15.1	33.8
Trouble with dentures	3.8±3.8	51.9	14.8	33.3
Burning sensation in lining of mouth and throat	4.1±3.4	46.6	21.9	31.5
Lining of mouth/ throat is sensitive to spicy/hot/acidic foods	5.9±3.5	28.1	18.5	53.4
Lining of mouth/ throat is sensitive to dryness	6.6±3.0	18.5	24.7	56.8
Burning pain in the lining of mouth/ throat changes food choice	4.1±3.9	51.0	13.1	35.9
Burning pain in lining of mouth /throat prevents brushing of teeth	0.8±1.9	91.0	5.5	3.4

Rating scale ranges from 0, indicating the least number of problems with a symptom, to 10, indicating the greatest number of problems with a symptom.

speaking ($x=2.6\pm3.1$, 14.9% in the severe group) and pain leading to difficulty sleeping ($x=2.1\pm3.1$, 13.6% in the severe group) were also reported.

The goal of this study was to present of oral symptoms associated with SS. Frequent and impactful symptoms were reported by the vast majority of subjects. These findings identify considerable impact of dry mouth in this population.

While this survey addressed oral symptoms in patients with hyposalivation due to SS, the findings may have implications for people with hyposalivation due to other causes. The severity of the symptoms reported in this survey further emphasise the need for investigation of SS management strategies. Salivary stimulation with a sialogogue and salivary substitute seem to offer minor benefits as do non-pharmaceutical approaches or frequent hydration (6, 7). The lack of better management approaches provides a

strong case for group support or other coping strategies (8). It is also imperative, given the intensity of the reported symptoms, that any novel treatment, whether immune-modulatory such as low-dose interferon (9) or other, stresses patient-driven outcomes of QOL in addition to objective measurements of salivary flow which may or may not result in symptomatic improvements (6). Emphasis on improving the QOL of SS patients may be key to reducing healthcare costs and the societal burden resulting from severe xerostomia-related oral symptoms (10).

J.B. EPSTEIN¹ DMD, MSD, FRCD(C),
FDS RCS(Ed), Diplomate ABOM,
D.C. VILLINES² MA,
H.Y. SROUSS³ DMD, PhD, Diplomate ABOM

Division of Head and Neck Surgery,
City of Hope, Duarte, CA;

²Advocate Health Care, Chicago, IL;

³Department of Oral Medicine and Diagnostic

Sciences, College of Dentistry, University of Illinois at Chicago, Chicago, IL, USA.

Please address correspondence to:
Dr. Joel B. Epstein, 8500 Wilshire Blvd,
Suite 800, Beverly Hills, CA 90211, USA.
E-mail: jepstein@coh.org

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