

## Supplementary Online Content

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**eTable 1.** Odds of Voice Laryngeal Disorders in Patients With Chronic Syndromes vs Control Group

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This supplementary material has been provided by the authors to give readers additional information about their work.

**eTable 2.** Odds of Voice Laryngeal Disorders in Patients With Chronic Syndromes vs Control Group

Diagnosis	Chronic pain syndromes group (215)	Control group (4035)	Unadjusted OR	95% CI	Adjusted OR <sup>#</sup>	95% CI
<b>Vocal cords pathology</b>	<b>103 (30.9)<sup>+</sup></b>	<b>2241 (36.7)</b>	0.774	0.610-0.982	0.808	0.635-1.028
VC cancer	2 (0.9) <sup>++</sup>	150 (3.7)	0.240	0.059-0.973	0.330	0.081-1.348
Chronic Laryngitis	11 (5.1)	178 (4.4)	1.139	0.613-2.115	1.126	0.604-2.101
Phonotraumatic injury	11 (5.1)	275 (6.8)	0.725	0.393-1.339	0.697	0.375-1.295
VC granuloma	8 (3.7)	98 (2.4)	1.511	0.728-3.132	2.088	0.994-4.386
VC paralysis	11 (5.1)	456 (11.3)	0.424	0.231-0.779	0.407	0.221-0.751
VC paresis	12 (5.6)	162 (4.0)	1.373	0.756-2.494	1.498	0.820-2.738
VC cyst	4 (1.9)	49 (1.2)	1.504	0.540-4.194	1.386	0.494-3.893
VC leukoplakia	-	54 (1.3)	-	-	-	-
VC dysplasia	-	45 (1.1)	-	-	-	-
Presbyphonia	13 (6.0)	202 (5.0)	1.183	0.667-2.095	1.302	0.721-2.352
Fungal Laryngitis	-	23 (0.6)	-	-	-	-
Laryngeal Papilloma	2 (0.9)	94 (2.3)	0.387	0.095-1.576	0.539	0.131-2.212
Reinke's edema	4 (1.9)	82 (2.0)	0.894	0.326-2.454	0.693	0.252-1.908
Inflammatory VC lesion	3 (1.4)	20 (0.5)	2.769	0.819-9.366	2.498	0.730-8.548
Ulcerative Laryngitis	2 (0.9)	31(0.8)	1.185	0.282-4.974	1.157	0.273-4.896
Glottic Webbing	-	14 (0.3)	-	-	-	-
VC scar/sulcus	7 (3.3)	105 (2.6)	1.217	0.562-2.635	1.413	0.647-3.084
non-SCC VC cancer	-	10 (0.2)	-	-	-	-
Laryngocele	1 (0.5)	3 (0.1)	6.134	0.636-59.12	5.253	0.524-52.647
Spasmodic Dysphonia	4 (1.9)	94 (2.3)	0.778	0.284-2.130	0.631	0.229-1.736
Dysarthria	3 (1.4)	34 (0.8)	1.625	0.497-5.319	1.442	0.437-4.761
Dystonia	2 (0.9)	41 (1.0)	0.895	0.215-3.715	0.741	0.177-3.103
Laryngeal tremor	3 (1.4)	19 (0.5)	2.915	0.858-9.901	1.875	0.548-6.422
<b>Functional Voice disorders</b>	<b>80 (24.0)</b>	<b>908 (14.9)</b>	1.812	1.396-2.353	1.679	1.290-2.185

Muscle Tension Dysphonia	66 (30.7)	709 (17.6)	1.884	1.423–2.494	1.748	1.317-2.320
Dysphonia	13 (6.0)	168 (4.2)	1.437	0.809-2.555	1.340	0.751-2.392
Hoarseness	-	27 (0.7)	-	-	-	-
Hypophonia	1 (0.5)	4 (0.1)	4.599	0.513-41.265	6.883	0.731-64.832
<b>Airway</b>	<b>16 (4.8)</b>	<b>588 (9.6)</b>	0.474	0.285-0.789	0.450	0.270-0.750
Supraglottic/glottic/posterior glottic stenosis	-	109 (2.7)	-	-	-	-
Subglottic/tracheal stenosis	2 (0.9)	196 (4.9)	0.181	0.045-0.734	0.163	0.040-0.659
Tracheostomy	2 (0.9)	137 (3.4)	0.264	0.065-1.069	0.280	0.069-1.140
Tracheomalacia	1 (0.5)	30 (0.7)	0.611	0.083-4.491	0.577	0.078-4.282
Shortness of breath	3 (1.4)	54 (1.3)	1.020	0.317-3.279	0.905	0.280-2.924
Paradoxical VC motion	8 (3.7)	60 (1.5)	2.483	1.177-5.236	2.364	1.110-5.032
<b>Swallowing</b>	<b>75 (22.8)</b>	<b>1336 (22.1)</b>	1.035	0.795-1.348	1.045	0.801-1.364
Laryngopharyngeal reflux disease	48 (22.3)	728 (18.0)	1.246	0.909-1.708	1.238	0.900-1.703
Dysphagia	25 (11.6)	493 (12.2)	0.923	0.608-1.402	0.927	0.608-1.414
Cricopharyngeal Hypertrophy	-	19 (0.5)	-	-	-	-
Aspiration	-	8 (0.2)	-	-	-	-
Esophageal stricture	-	26 (0.6)	-	-	-	-
Esophageal perforation	-	1 (0.0)	-	-	-	-
Esophageal dysmotility	1 (0.5)	20 (0.5)	0.966	0.129-7.237	0.882	0.116-6.676
Zenker's	1 (0.5)	35 (0.9)	0.523	0.071-3.829	0.568	0.077-4.213
Eosinophilic esophagitis	-	6 (0.1)	-	-	-	-
<b>Other</b>	<b>55 (16.7)</b>	<b>969 (16.0)</b>	1.057	0.792-1.412	1.076	0.804-1.440
Chronic cough	28 (13.0)	401 (9.9)	1.304	0.874-1.945	1.192	0.796-1.783
Sinusal	8 (3.7)	199 (4.9)	0.731	0.358-1.496	0.825	0.401-1.695
H+N Cancer	1 (0.5)	72 (1.8)	0.249	0.035-1.798	0.292	0.040-2.118

#Adjusted for age and gender +Percentage of all diagnoses in the group ++Percentage of patients in the group having the diagnosis  
Abbreviations: VC – vocal cord, H+N – head and neck

**eTable 2.** Odds of Voice Laryngeal Disorders in Patients With Fibromyalgia vs Control Group

Diagnosis	Fibromyalgia group (77)	Control group (4172)	Unadjusted OR	95% CI	Adjusted OR <sup>#</sup>	95% CI
<b>Vocal folds pathology</b>	<b>40 (31.7)<sup>+</sup></b>	<b>2304 (36.5)</b>	0.811	0.555-1.184	0.871	0.594-1.275
VC cancer	1 (0.8) <sup>++</sup>	151 (2.4)	0.327	0.045-2.354	0.525	0.072-3.826
VC paralysis	3 (2.4)	464 (7.3)	0.308	0.098-0.971	0.300	0.095-0.949
Inflammatory VC lesion	2 (1.6)	21 (0.3)	4.837	1.122-20.855	4.219	0.966-18.430
Ulcerative Laryngitis	2 (1.6)	31 (0.5)	0.306	0.072-1.291	3.166	0.740-13.550
<b>Functional Voice disorders</b>	<b>37 (29.4)</b>	<b>951 (15.0)</b>	2.347	1.590-3.464	2.131	1.440-3.153
Muscle Tension Dysphonia	30 (23.8)	745 (11.8)	2.338	1.541-3.548	2.125	1.397-3.232
Dysphonia	7 (5.6)	174 (2.8)	2.077	0.955-4.518	1.912	0.875-4.176
<b>Airway</b>	<b>7 (5.6)</b>	<b>597 (9.4)</b>	0.564	0.262-1.214	0.524	0.243-1.132
Paradoxical VC motion	4 (3.2)	64 (1.0)	3.204	1.149-8.939	2.904	1.030-8.187
<b>Swallowing</b>	<b>23 (18.3)</b>	<b>1392 (22.0)</b>	0.790	0.501-1.247	0.799	0.506-1.263
<b>Other</b>	<b>19 (15.1)</b>	<b>1074 (17.0)</b>	0.867	0.530-1.419	0.871	0.531-1.429
Chronic cough	11 (8.7)	419 (6.6)	1.347	0.720-2.520	1.216	0.648-2.283

<sup>#</sup>Adjusted for age and gender <sup>+</sup>Percentage of all diagnoses in the group <sup>++</sup>Percentage of patients in the group having the diagnosis Abbreviations: VC – vocal cord

**eTable 3.** Odds of Voice Laryngeal Disorders in Patients With Irritable Bowel Syndrome vs Control Group

Diagnosis	IBS group (80)	Control group (4169)	Unadjusted OR	95% CI	Adjusted OR <sup>#</sup>	95% CI
<b>Vocal folds pathology</b>	<b>32 (33.0)<sup>+</sup></b>	<b>2312 (36.4)</b>	0.859	0.561-1.316	0.895	0.583-1.375
VC cancer	0 (0.0) <sup>++</sup>	152 (2.4)	-	-	-	-
VC granuloma	4 (4.1)	102 (1.6)	2.634	0.950-7.302	3.469	1.236-9.739
VC paralysis	3 (3.1)	464 (7.3)	0.405	0.128-1.282	0.394	0.124-1.250
Laryngocele	1 (1.0)	3 (0.0)	22.931	2.271-213.704	19.350	1.938-193.298
<b>Functional Voice disorders</b>	<b>18 (18.6)</b>	<b>970 (15.3)</b>	1.263	0.754-2.117	1.176	0.700-1.974
Muscle Tension Dysphonia	15 (15.5)	760 (12.0)	1.345	0.772-2.344	1.253	0.718-2.188
Spasmodic Dysphonia	3 (3.1)	95 (1.5)	2.101	0.654-6.750	1.778	0.550-5.750
<b>Airway</b>	<b>6 (6.2)</b>	<b>598 (9.4)</b>	0.634	0.276-1.454	0.609	0.265-1.400
Supraglottic/glottic/posterior glottic stenosis	0 (0.0)	109 (1.7)	-	-	-	-
Subglottic/tracheal stenosis	0 (0.0)	199 (3.1)	-	-	-	-
Tracheostomy	0 (0.0)	139 (2.2)	-	-	-	-
Paradoxical VC motion	4 (4.1)	64 (1.0)	4.223	1.507-11.837	4.039	1.428-11.426
<b>Swallowing</b>	<b>21 (21.6)</b>	<b>1394 (22.0)</b>	0.982	0.603-1.598	0.990	0.608-1.612
<b>Other</b>	<b>20 (20.6)</b>	<b>1073 (16.9)</b>	1.277	0.777-2.097	1.296	0.788-2.133

<sup>#</sup>Adjusted for age and gender <sup>+</sup>Percentage of all diagnoses in the group <sup>++</sup>Percentage of patients in the group having the diagnosis  
Abbreviations: VC – vocal cord,

**eTable 4.** Odds of Voice Laryngeal Disorders in Patients With Chronic Fatigue Syndrome vs Control Group

Diagnosis	Chronic fatigue group (70)	Control group (4179)	Unadjusted OR	95% CI	Adjusted OR <sup>#</sup>	95% CI
<b>Vocal folds pathology</b>	<b>31 (29.0)<sup>+</sup></b>	<b>2313 (36.5)</b>	0.710	0.466-1.081	0.720	0.471-1.100
VC cancer	1 (0.9) <sup>++</sup>	151 (2.4)	0.387	0.054-2.788	0.470	0.064-3.421
VC paresis	6 (5.6)	168 (2.7)	2.182	0.944-5.042	2.323	1.002-5.389
<b>Functional Voice disorders</b>	<b>23 (21.5)</b>	<b>965 (15.2)</b>	1.525	0.956-2.430	1.434	0.898-2.291
Muscle Tension Dysphonia	19 (17.8)	756 (11.9)	1.594	0.965-2.633	1.502	0.908-2.486
<b>Airway</b>	<b>3 (2.8)</b>	<b>601 (9.5)</b>	0.275	0.087-0.870	0.270	0.085-0.854
Supraglottic/glottic/posterior glottic stenosis	0 (0.0)	109 (1.7)	-	-	-	-
Subglottic/tracheal stenosis	1 (0.9)	198 (3.1)	0.293	0.041-2.107	0.276	0.038-1.993
<b>Swallowing</b>	<b>30 (28.0)</b>	<b>1385 (21.9)</b>	1.393	0.910-2.133	1.403	0.915-2.149
Laryngopharyngeal reflux disease	18 (16.8)	758 (12.0)	1.489	0.892-2.485	1.517	0.906-2.540
Dysphagia	11 (10.3)	508 (8.0)	1.315	0.700-2.470	1.290	0.684-2.432
<b>Other</b>	<b>20 (18.7)</b>	<b>1073 (16.9)</b>	1.128	0.691-1.842	1.163	0.711-1.903

<sup>#</sup>Adjusted for age and gender <sup>+</sup>Percentage of all diagnoses in the group <sup>++</sup>Percentage of patients in the group having the diagnosis  
Abbreviations: VC – vocal cord,