

Supplementary Online Content

Ludlow CL, Domangue R, Sharma D, et al. Consensus-based attributes for identifying patients with spasmodic dysphonia and other voice disorders [published online June 21, 2018]. *JAMA Otolaryngol Head Neck Surg*. doi:10.1001/jamaoto.2018.0644

eTable 1. Distribution of Site Classifications of 178 participants

eTable 2. Confusion Matrix Between Site Diagnoses and External Rater Classification

eFigure 1. A flow chart to illustrate the design of the study

eMethods. The tasks included in the Speech Recording and Sentences Used in Nasolaryngoscopy Testing

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

Online Supplementary Materials included:

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eTable 1. Distribution of Site Classifications of 178 participants

11 Categories	Number	Percent
ADSD alone*	35	19.7
ABSD alone	6	3.4
VT alone	6	3.4
ADSD with VT*	27	15.1
ABSD with VT	6	3.4
MTD alone	29	16.3
ADSD with MTD*	31	17.4
ADSD with VT and MTD*	9	5.0
VT with MTD	8	4.5
Paralysis/paresis	15	8.4
Other	6	3.4
Total	178	100

*Patients with some form of SD

eTable 2. Confusion Matrix Between Site Diagnoses and External Rater Classification

Site Diagnosis	External Rater ASD	External Rater ABSD	External Rater MTD	External Rater Tremor	External Rater Paralysis	External Rater Other	Percent Site Class	Percent Same Rater and Site Classification
ADSD	74	0	20	24	3	7	80	57.8
ABSD	2	2	1	0	0	0	3.3	40.0
MTD	0	0	3	0	0	1	2.5	75.0
Tremor	4	0	0	5	0	0	5.6	55.6
Paralysis	0	0	3	0	6	1	6.25	60.0
Other	0	0	1	0	1	2	2.5	25.0
Total	80	2	28	29	10	11	160	57.5
Percent External Rater Classification	46.25	1.25	12.5	15	1.89	4.38		

eFigure 1 on next page

eFigure 1

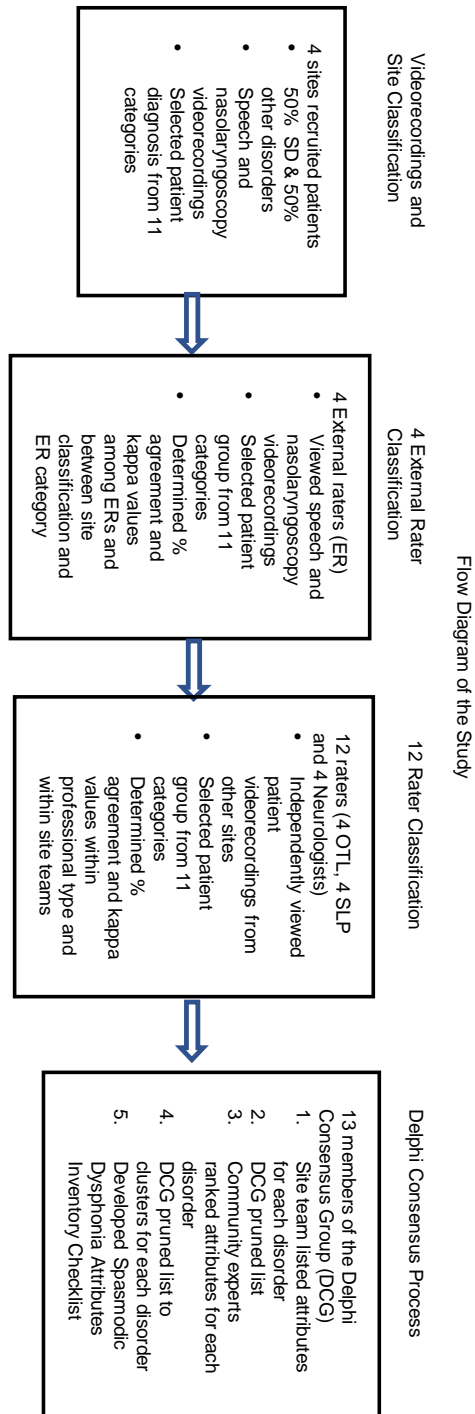


Figure 1. A flow diagram of the study which initially included participant recruitment and speech and nasoendoscopy videorecordings at 4 sites and site diagnosis into one of 11 categories. Second 4 external raters viewed the videorecordings and classified the participants using the same 11 categories. Third, 12 raters from the 4 sites which included speech-language pathologists (SLPs), otolaryngologists (OTL) and neurologists specializing in movement disorders classified 50 patients using the same 11 categories. Finally a 4 stage Delphi process was used to identify groups of attributes for each of 4 disorders, the Spasmodic Dysphonia Attributes Inventory

eMethods

Speech Tasks

1. Repeating Sentences with Glottal Stops

Tom wants to be in the army.
We eat eels every day.
I want to put my doll in the cart.
I hurt my arm on the iron bar.
Are the olives large?
Polly wanted to loll on the hearth.
John argued ardently about honesty.
Jack ran to get an apple for Sally.
We mow our lawn all year.
He dashed to the back of the factory.

2. Sentences with voiceless consonants before a vowel

He has gone home because he is hungry.
The puppy bit the tape.
Harry is happy because he has a new horse.
During baby-hood he had only half a head of hair.
Who says a mahogany highboy isn't heavy?
A high, harsh voice is a handicap.
Boys were singing songs outside of our house.
Sally fell asleep in the soft chair.
I saw six birds in that small nest.
Intensity is one of several aspects of stress.

3. Repeating sentences in a whisper:

Tom wants to be in the army.
We eat eels every day.
Jack ran to get an apple for Sally
He has gone home because he is hungry.
The puppy bit the tape.
Boys were singing songs outside of our house.

4. Prolonging vowels for at least 10 seconds each:

/i/ (the vowel sound in EAT)
/a/ (the vowel sound in LAH)

5. Shouting phrases

No! Not Now!
Wait for me!

Nasolaryngoscopy Sentences

1. Sentences

We eat eels every day.
Each time it oozes blue.
She speaks pleasingly.
Peter needs help at the peak.

2. Shouted phrases

"Wait for me!"
"No! Not Now!"