

Appendix (supplementary file) 1: Prevalence of laryngeal and extra-laryngeal signs associated with LPR.

Items of Reflux Sign Assessment	%
Oral cavity	
Anterior plicas erythema	91.0
Uvula erythema	69.0
Uvula edema	39.5
Coated tongue	49.4
Pharyngeal cavity	
Nasopharyngeal wall erythema ± inflammatory granulations	49.2
Posterior oro- or hypopharyngeal wall erythema	89.5
Posterior oro- or hypopharyngeal wall inflammatory granulations	73.7
Tongue tonsil hypertrophy with unapparent vallecula	62.8
Contact between epiglottitis and tongue tonsils	62.6
Pharyngeal sticky mucus	82.8
Larynx	
<i>Subglottic area</i>	
Subglottic edema	4.0
Subglottic erythema	11.1
<i>Supraglottic area</i>	
Ventricular band edema	38.8
Ventricular band erythema	54.1
Epiglottis edema	32.6
Epiglottis redness	60.5
<i>Posterior commissure & retro-cricoid</i>	
Inter-arytenoid erythema	94.9
Inter-arytenoid granulatory tissue	41.5
Erythema of the posterior commissure	64.3
Posterior commissure hypertrophy	88.9
Retro-cricoid erythema	63.2
Retro-cricoid edema (=contact between retro-cricoid area & hypopharyngeal posterior wall during breathing/opening glottis)	77.3
Vocal folds	
Endolaryngeal sticky mucus	78.5
Redness	11.3
Edema of the free-edge of the vocal folds	2.0
Vocal fold lesions (associated with reflux)	
- <i>Granuloma(s)</i>	3.2
- <i>Nodules</i>	0.0
- <i>Polyyps or hemorrhages</i>	0.0
- <i>Reinke's edema</i>	1.0
- <i>Laryngeal or vocal fold keratosis</i>	2.0
- <i>Ulcerations</i>	0.0

Appendix 1 footnotes: The prevalence of the LPR-associated signs was determined in 101 patients with LPR disease regarding MII-pH. The weight assignment of each finding of RSA was based on these prevalence results: for each patient, the occurrence (=1) or absence (=0) of the findings described in the RSA on mouth photos and videolaryngostroboscopy was assessed. Findings that were present in $\geq 80.0\%$ of patients received a high weight of 4 in the RSA; findings found between 60.0% and 79.9% received a weight of 3; findings found between 40.0% and 59.9% received a weight of 2; and those found in $<40.0\%$ received a weight of 1. Abbreviations: LPR = laryngopharyngeal reflux; MII-pH = multichannel intraluminal impedance-pH monitoring.

Appendix 2 (supplementary file): Test-retest reliability.

Reflux Sign Assessment items	r_s	p-value
1. Anterior pillar erythema	0.791	<0.001
2. Uvula erythema ± edema	0.583	0.007
3. Coated tongue	0.575	0.013
Oral cavity subscore	0.740	<0.001
1. Nasopharyngeal wall erythema ± inflammatory granulations	0.655	0.006
2. Posterior oro- or hypopharyngeal wall erythema	0.464	0.022
3. Posterior oro- or hypopharyngeal wall inflammatory granulations	0.811	<0.001
4. Tongue tonsil hypertrophy	0.850	<0.001
5. Contact between epiglottitis and tongue tonsils	0.882	<0.001
6. Pharyngeal sticky mucus	0.603	0.001
Pharyngeal cavity subscore	0.664	<0.001
<i>Sub- and supraglottic areas</i>		
1. Subglottic edema ± erythema	0.990*	<0.001
2. Ventricular band erythema ± edema	0.514	0.020
3. Epiglottis redness ± edema	0.630	0.004
<i>Posterior commissure & retro-cricoid</i>		
1. Commissure posterior/arytenoid erythema	0.743	<0.001
2. Inter-arytenoid granulatory tissue	0.990	<0.001
3. Posterior commissure hypertrophy	0.554	0.011
4. Retro-cricoid erythema	0.443	0.050
5. Retro-cricoid edema	0.533	0.015
<i>Vocal folds</i>		
1. Endolaryngeal sticky mucus deposit	0.892	<0.001
2. Vocal fold erythema	0.990*	<0.001
3. Edema of the free-edge or the entire vocal folds	0.990*	<0.001
4. Vocal fold lesions	1.000	<0.001
Laryngeal subscore	0.655	<0.001
RSA Total score:	0.813	<0.001

Appendix 2 footnotes: *The r_s is significant but the number of patients with this sign was low (N<5); limiting the consistence of the r_s. Abbreviations: r_s = Spearman rho; RSA = reflux sign assessment.

Appendix 3: Instrument analysis.

Instrument	Studied population	Construct definition	Content validity	Internal consistency	Test-retest reliability	Concordance	Convergent validity	Known-groups validity	Responsiveness to change	Interpretability & scoring
RFS ⁵	LPR patients	+	+/-	N.P.	Total: 0.95 Item: >0.90	0.90 2 physicians	N.P.	+	+	+
LRG ²⁰	LPR patients	+	+	N.P.	Total: 0.83-0.90	0.43 3 physicians	N.P.	N.P.	+	+/-
CPLI ²¹	LPR patients	+	+/-	N.P.	N.P.	N.P.	N.P.	N.P.	+	+/-
Vaezi Instrument ²²	LPR patients	+	+	N.P.	0.26-0.78	0.32-0.58 1 physician 1 Speech th.	N.P.	+	+	N.A.
LRDI ²³	Suspected LPR	+	+	N.P.	0.42-0.78	0.30 3 physicians	N.P.	+	+	+/-
LGS ²⁴	Suspected LPR	+	+/-	N.P.	N.P.	0.75-0.93 3 physicians	N.P.	N.P.	+	+/-

Appendix 3 footnotes: CPLI = chronic posterior laryngitis index; LGS = laryngoscopic grading scale; LPR = laryngopharyngeal reflux; LRDI = laryngopharyngeal reflux disease index; LRG = laryngeal reflux grade; N.A. = not available; N.P. = not provided (the analysis was not made); RFS = reflux finding Score; + = the conducted analysis was completely consistent with our definition; +/- = the conducted analysis was partly consistent with our definition; - = the analysis was inconsistent.