

INSTRUMENTAL VOICE ASSESSMENT: STUDY OF AERODYNAMIC PARAMETERS OF DYSPHONIC SUBJECTS WITH UNILATERAL VOCAL FOLD PARALYSIS

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Instrumental measurements of dysphonia have been the subject of a very abundant literature for over 30 years, which contrasts with the relatively confidential clinical use of these methods, generally reserved for specialized centers. In particular, the position of aerodynamic measurements is not clearly established, notably because the glottic mechanisms leading to an increase in the glottal air leak or to an increase in the subglottic pressure are not unanimous. It is understandable that, on the aerodynamic side in particular, it is difficult to pool data from patients with organic dysphonia and patients with functional dysphonia. Similarly, it is not easy and probably unnecessary in clinical practice to compare lesions such as polyps with cysts, for example.

We therefore wanted to evaluate the value of aerodynamic measurements on a population of pathological subjects that are perfectly comparable in terms of glottic functioning. We included 120 subjects with isolated unilateral laryngeal immobility (with no associated neurological problems in particular), who were divided into 48 subjects classified G1, 41 classified G2 and 21 classified G3.

Our results showed that the G1 oral airflow (OAF) rate (average of 296 cm³/s) was statistically different from the G2 (average of 374 cm³/s) and that the oral airflow of the subjects classified G3 (average of 458 cm³/s) was statistically different from subjects classified as G2. These differences were also found with the Maximum Phonation Time (MPT) although correlations between TMP and OAF are not very high. More generally, our results confirm the scientific and clinical interest of comparing subjects comparable from the point of view of glottic functioning ("apples with apples").

The discussion tries to put the different methods in perspective with the glottal physiology.