

# **DIAGNOSIS OF FUNCTIONAL DYSPHONIA WITH THE USAGE OF DIRECT AND INDIRECT MUCOSAL WAVE MEASUREMENTS**

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## Introduction

The publication describes the characteristics of glottis in functional dysphonias (FDs) objectified by open quotients (OQ), measured with the videostrobokymography (VSK) and electroglottography (EGG).

## Aim

The aim of the study was to objectify glottal function in different types of FDs. The scope was to use open quotients gained from various mucosal wave imaging techniques for differential diagnosis of FDs.

## Material and Method

The study included 204 people. Each patient had undergone otolaryngologic and phoniatic examination. Laryngovideostroboscopy (LVS), electroglottography (EGG) and videostrobokymography (VSK) were conducted, recorded and stored using an EndoSTROB-DX-Xion GmbH (Berlin) device with DIVAS software.

## Results

All of patients with FDs had abnormalities in LVS. Statistical analysis has shown differences in LVS characteristics according to the type of FD. Mean values of  $OQ_{VSK}$  in control was 0,521 and in studied group 0,565 ( $p < 0.05$ ). Significant differences were found between patients with hypofunctional and hyperfunctional dysphonia.  $QQ_{EGG}$  mean value in patients with FDs was 0.581 and in control group 0,549 ( $p < 0.01$ ). There were statistically significant differences between groups of patients with hyper- and hypofunctional dysphonias. Authors observed different relations of OQ related with the type of FD. Authors decided to introduce a new parameter, illustrating the proportion of

## Conclusions

Videostrobokymographic and electroglottographic open quotients differentiate euphony from dysphony. Value of the  $OQ_{VSK}$  and  $QQ_{EGG}$  and their proportion varies depending on different types of functional dysphonias. The  $OQ_{VSK}$  and  $QQ_{EGG}$  should be included in the diagnostic algorithm of voice.