

XIX World Congress of Oto-Rhino-Laryngology June 1-5, 2009

MEDICAL DOCTOR, PHD, EAR-NOSE-THROAT SPECIALIST

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State: DENMARK

Area: ONCOLOGY AND HEAD AND NECK SURGERY

Presentation Form: INSTRUCTIONAL COURSE

Date: 06-01-2009

Time: 16:50:00

Room: ROOM 14

INTRODUCTION

High speed films give new possibilities for the evaluation of larynx and e.g. voice related dystonia and tremor, using frames of vocal cord movements of 2000-4000 pr.second

OBJECTIVES

To evaluate vocal dystonia and related disorders with highspeed films before and after treatment of upper airway mucosal disorders in a better way because stroboscopy only gives average pictures

MATERIAL & METHODS

55 patients with localised and universal dystonia/tremor were prospectively referred to the clinic in a period of 8 months from our local co-workers in physiotherapy, complaining of all round voice problems. The physiotherapists wanted to have a systematical routinely given overall status of their immune system and eventual treatment of upper airway mucosal problems. The patients represented training groups already established. Visual scores from 1-100 were made by the patients after treatment. A comparable control group of normal persons was set up.

The high speed films included on average 2 seconds of films, that were analysed in the mode: comparing kymography with electroglottograms (EGG), acoustical analysis and specific presentation of the right and left vocal cords' movement in the front, middle and rear area of the open phases. The open quotient in the front, middle and rear and the areas between the vocal cords were written down as given by the firm (Wolf Inc.) and statistically analysed before and after the given treatment (SAS institution).

RESULTS

The dystonia related changes were suspected in the kymography and the EGG especially when compared with the acoustical curves. We have tried to evaluate the "cycle look" of the variance of frequency mostly around 5-20 cycles. Using Nominal Logistic Fit for improvement a chi square calculation was significant for all parameters after treatment of the upper air way mucosa.

CONCLUSION

Many voice related neurological disorders can be better diagnosed in the future using

high speed films