## PHONIATRIC OBJECTIVITY AND OSTEOPATHIC EVALUATION IN CROSSED APPROACH TO MUSCLE TENSION DYSPHONIA

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Muscle Tension Dysphonia (MTD) is a condition of multiple origins and multi faceted in itself.

Often considered Vocal Fatigue effect's, sometimes a condition derived from postural changes, related to function or morphology, where Vocal Fatigue becomes an effect instead of a cause. The "traditional" approach focuses some aspects in videolaryngo-stroboscopy, but Behrman and Schutte (2003) in their review found no significant relations between the main of those aspects and Vocal Distress. Other Authors (Van Houtte et Al 2011) observed the need of multidisciplinary approach both in diagnosing and in setting treatments of this condition. The presence of former trauma or disease involving posture muscles and/or kinetic chains may contribute as well to development of MTD (Berioli 2005). A recent pilot study about Vocal Fatigue underlined the need to consider multiple factors and consequently set individual treatments in MTD (E D'haeseleer, M Behlau et Al).

The Authors present a joint approach to a random series of Patients, referring to a Phoniatric Practice for Dysphonia. Most studies about vocal tract "reconstruction" both mathematical models and 3D observations come from the hypotesis of a symmetrical tube. But in everyday objective observations, symmetry is rarely found. Authors try to observe if asymmetry may be related to MTD.

Vocal Tract objectivity is video registered with Inventis Audiomedica System: camera Medical Plus CCD Sony sensor High Sensibility1280 x 960 pixel, HighLight Plus clinical LED stroboscope, Visia software. Exams performed by rigid optic fibers ( $0^{\circ}$  and  $70^{\circ}$ ), in a few cases by adding flexible observations.

Both the ENT/Phoniatrician and the DO have pluridecennial experience in Artists and Artistic Voice, as well as in prevention, diagnosis and treatment of aspects related to Vocal Fatigue and Muscle Tension.

The Authors compare objective results in MTD Patients, before and after Osteopathic evaluation and treatment. The Authors discuss about observed asymmetries and misalignments in glottis, in the vocal tract and in kinetic chains, correlating those data to presence or absence of tensions. Also Patients' subjectivity is registered and analyzed about "perceived or unperceived" symptoms and their changes through evaluations, in a planned approach to awareness arousal in Patients, to help them correct misalignements, but feel free in normal vocal, mimics and gestural communicative dynamics. Results are presented to discuss functional evidences and also criticize limits of instrumental data, if taken alone in these cases.

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