



Muscle Tension Dysphonia

Muscle Tension Dysphonia (MTD) is a voice disorder of excess tension in the laryngeal and paralaryngeal muscles. Patients experience a rough and strained dysphonia and often times, pain associated with voice use. Diagnosis is based largely on history, fiberoptic exam findings, perceptual and acoustic voice analysis. First line treatment is voice therapy and in cases of secondary MTD, treatment of the primary voice issue is essential.

Anatomy & Physiology

- Morrison –Rammage classification divides MTD into 5 types based on 6 laryngeal features.
 - Laryngeal Isometry
 - Glottic Contraction
 - Supraglottic Contraction
 - Anterior-Posterior Contraction
 - Incomplete Adduction
 - Bowing
 - Morrison MD, Rammage LA: Muscle misuse voice disorders: Description and classification. *Acta Otolaryngol* 1993;113:428–423.

Assessment

- Morrison et al described diagnostic features based on history, laryngoscopic examination, perceptual-acoustic assessment, voice-related musculoskeletal features and psychological evaluations.
 - Morrison MD, Nichol H, Rammage LA. Diagnostic criteria in functional dysphonia. *Laryngoscope* 1986;96:1–8.
- Van Lawrence classified MTD into intrinsic and extrinsic laryngeal features based on fiberoptic exam. Intrinsic features are 1) harsh approximation of arytenoids, 2) minimal vocal cord length visibility, 3) vestibular fold contribution to phonation. Extrinsic features are 1) excessive vertical movement of the larynx, 2) anteroposterior compression of the larynx and 3) lateral compression of the larynx.
 - Lawrence, Van L. Suggested Criteria for Fibre-Optic Diagnosis of Vocal Hyperfunction. In: *Care of the Professional Voice Symposium*. London: The British Voice Association, 1987.

Pathophysiology

- Etiologic factors are characterized into three subgroups: 1) psychological and/or personality factors, 2) vocal misuse and abuse, and 3) compensation for underlying disease.
 - Van Houtte, E., Van Lierde, K., Claeys, S. **Pathophysiology and treatment of muscle tension dysphonia: a review of the current knowledge.** *J Voice*. 2011;25:202–207.



Treatment

- Voice therapy is mainstay of treatment and numerous studies reveal positive effects through several different treatment approaches.
 - Eastwood C, Madill C, McCabe P. The behavioral treatment of muscle tension voice disorders: A systematic review. *Int J Speech Lang Pathol*. 2015 Jun; 17(3):287-303.