

Vocal Disorders

A Guide to their Diagnosis

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The term 'phonasthenia', indicating a functional weakness or failure of the voice, came into use during the 19th century. In spite of objections, from NADOLECZNY [1928] and others, against this vague term, it is still used by some. It is commonly defined as a disturbance in the occupational use of the voice, with a connotation that it is a psychogenic disorder, the subjective symptoms being predominant in the presence of few objective findings. The term phonasthenia may have had a use in an era when the cause of disorders of non-organic origin was unknown and the patients were treated for hysteria. At the present time the medical profession can be expected to be able to make a more accurate diagnosis.

There are definite differences between habitual misuse of the voice and psychogenic voice disorders, both of which can be of hypokinetic (hypo-functional) or hyperkinetic (hyperfunctional) nature. The term phonasthenia does not make this clear and should, therefore, be abolished. Table I shows some general characteristics which can help in the distinctions.

Psychogenic Dysphonia

The extreme hypokinetic form of psychogenic dysphonia is aphonia, occurring frequently in women and characterized by whispered speech and (almost) complete absence of voice. The condition may persist long after the stress by which it was provoked. If that is the case, but only then, any laryngological manoeuvre for restoring normal movement to the vocal cords, combined with sufficient emotional support, may be used to bring back the voice.

Table I. Differences between two types of functional voice disorder

Psychogenic dysphonia	Habitual dysphonia
Sudden onset	gradual or remote onset
Usually of short duration	long duration
Inconstant symptoms	constant symptoms
Voice has been normal	voice has never been very good
History of emotional stress or mental conflict	history of voice strain during mutation (puberty) of laryngitis, frequent colds, bronchitis

Dysphonia spastica, or vocal stuttering, is an extreme hyperkinetic form of psychogenic dysphonia mostly seen in men. It is much harder to treat because of deeper personality problems. It is a rather aggressive way of producing short irregular, spastic runs of speech alternating with lengths of normal speech.

Habitual Dysphonia

The above very rare condition is not to be confused with the more common 'spastic dysphonia', a hyperkinetic type of habitual misuse of the voice, with more constant hoarseness or harshness.

The hypokinetic form of habitual dysphonia is the most frequently occurring dysphonia of all. The voice is weak and often too high, with little resonance; the rush of air through the incompletely closed glottis causes the voice to be breathy. The person who habitually uses this inefficient way of voice production is likely to have difficulty in noisy surroundings or when professional use of the voice is required, as in debating or in teaching – for instance in reading a story to thirty small children. In such occupational circumstances, the patient compensates for his vocal incompetence by forcing his voice, which increases the vocal output at the cost of stress to the internal and external musculature of the larynx. The function of the vocal organs proceeds subconsciously as long as it is relaxed and well balanced. But functional inadequacy, e.g. incomplete glottal closure, gives rise to compensatory activity at other levels (constriction of the ventricular folds; or raising the breath pressure) and the system becomes imbalanced, that is dyskinesia. The strain leads to a burning sensation, or a lump in the throat. The failure to get across to the audience gives rise to even more tension and as the voice becomes even worse the

speaker may give up his attempts altogether. In people in speaking professions this used to be described as phonasthenia but there is no essential difference between habitual faulty use of the voice by professional speakers and other people, and, therefore, the term phonasthenia is pretentious.

If the main factor is a poorly trained voice in a healthy and confident person the diagnosis is habitual dysphonia, whereas if the trouble is anxiety or feelings of insufficiency in a person who is perfectly capable of normal voice functions, the diagnosis is psychogenic dysphonia. Retraining the voice habit demands a different treatment programme than that for reconditioning the emotional problem.

Secondary Organic Dysphonia

Prolonged misuse of the voice lead to organic alterations of the vocal folds. With A. SONNINEN and the Department of Medical Physics we have worked on several hypotheses as to the causes and effects of vocal strain (1972). When the glottis is incompletely closed and a high rate of airflow is used to obtain a greater vocal output, Bernoulli (suction) and other traumatic effects may cause effusions and epithelial thickening to form along the borders of the vocal cords: edema or nodules of the membranous parts of the cords, leukoplakia of the anterior half, and pachydermia of the posterior half of the glottis. As these are all consequences of detrimental voice habits, often combined with smoking and drinking, they form a separate group in voice pathology. We call them secondary organic voice disorders. They are flanked on the one side by the psychogenic and habitual dysphonias with little or no organic involvement and on the other side by the primary organic voice disorders where the organic change is not primarily caused by dysfunction.

This group of secondary organic dysphonia contains by far the most causes of vocal complaints. It is important to decide from the diagnosis which aspect comes first in our therapy programme: re-education of the voice which cannot stand stress, or surgical intervention to improve the condition of the cords before starting vocal exercises.

Re-educating the patient with an inefficient or detrimental use of the voice is an art and a craft that has to be learned by several years of apprenticeship. A general procedural outline can, however, be given for the laryngologist who wants to understand such treatment in the interest of his patients.

Table II. Resume of voice disorders

Functional dysphonia	psychogenic aphonia	extremely hypokinetic
	psychogenic dysphonia	hypokinetic, hyperkinetic
	dysphonia spastica (voice stuttering)	extremely hyperkinetic
	habitual dysphonia	hypokinetic, hyperkinetic
	Habitual dysfunction during and after mutation	prolonged mutation, mutation falsetto, incomplete mutation
Secondary organic dysphonia	simple laryngitis, chronic nodular laryngitis, vocal fold edema, polyps, chronic hypertrophic laryngitis (contact ulcer, leukoplakia)	consequences of habitual dysphonia and vocal strain
Primary organic dysphonia	congenital malformation, paralysis, changes by endocrine disorder (virilisation of women's voices), specific infections, trauma (accidental or surgical), tumors (benign or malignant)	

(1) Identification of the problem, and motivation for therapy: this includes making the patient aware that it is he, not the therapist, who is in command of his vocal organs, and he who can change his vocal habits.

(2) Altering the habitual way of voice production and gradually shaping it to optimal use for the patient by progressive change of habit by: abolishing tenseness by relaxation, improving posture and breath control; phonation in rhythmic alternation with the therapist: closure, vocal fry and resonance exercises (for hypokinetic voices): chewing, yawning and soft attack practice (for hyperkinetics); projection of the voice, improving the articulation.

(3) Establishing the new phonatory habit by practicing at home and in situations outside treatment session.

(4) Transfer to daily use of the new voice habit by applying it increasingly in daily life situations. Progress is checked with a log-book. The ENT specialist can do much for patients who come to him with a functional voice problem, with or without a secondary organic disorder by: (a) using a correct diagnostic classification (not 'phonasthenia'); (b) refraining from

surgical intervention when vocal rehabilitation can be attained by better use of the voice alone (as in most cases of nodules); (c) motivating the patient for voice practice and helping him to acknowledge his own responsibility in treatment; (d) encouraging speech therapists and ensuring that they receive adequate training in the re-education of voice patients.