Voice Problems in Entertainers

Voice disorders can affect any member of society and are a common challenge encountered by ENT surgeons. Koufman (1999) describes four different types of voice user in the working environment:

- **Level 1** - The elite vocal performer, in whom even slight vocal changes may have dire consequences. Most actors and singers fall into this group.
- **Level 2** - The professional voice user, in whom moderate vocal problems may prevent an adequate job performance, e.g., teachers, lecturers, etc.
- **Level 3** - The non-vocal professional, in whom a severe vocal disorder may prevent adequate job performance, e.g., lawyers, ENT surgeons, businessmen, etc.
- **Level 4** - The non-vocal non-professional, in whom vocal quality is not a prerequisite for adequate work performance.

Koufman also states that 45% of people suffering from voice disorders are professional vocalists (levels 1 and 2). For these people, difficulties with phonation not only have a social and psychological impact, but may also have profound career and economic implications. It is therefore essential that otorhinolaryngologists, with an interest in voice, are capable of prompt and accurate diagnosis of disorders and the institution of safe and effective treatment.

The ideal management of such cases is in specialised, multidisciplinary voice clinics where Otorhinolaryngology and speech therapy expertise is at hand. This may not always be possible, however, if called to advise an entertainer shortly before performance time.

The Voice Clinic

It is now recognised that a multidisciplinary approach with ENT and speech therapists working closely together is the preferred option. Voice coaches and singing teachers should also be involved where possible when treating professional performers. South Yorkshire still has a thriving club scene and examples of artists in this genre are shown in Figure 1 and Table 1. Singers and teachers form the two largest professional groups attending our Voice Clinic.

Disorders

Classification systems provide a way of structuring diseases and pathologies. They can, however, lead to oversimplification and result in incomplete understanding. Several different classifications exist for voice disorders, as outlined by Freeman and Fawcett (2000). One option is to divide voice disorders into organic and functional, but it must be remembered that there is considerable overlap/connection between the two. Serious pathologies should, of course, be excluded.

Organic disorders

**Acute laryngitis**

A very common complaint that is usually short lived and self-resolving. It may result from voice abuse, infection, chemical exposure (e.g., smoking, alcohol, etc.). The larynx is found to be mildly oedematous and erythematous.

**Chronic laryngitis**

This also has a multifactorial aetiology, the common culprits include: smoke, alcohol, voice abuse, acid reflux, chronic sinusitis, mouth breathing, dry/dusty atmospheres, etc. Laryngeal oedema is usually more pronounced than in acute laryngitis.

**Vocal fold nodules**

These are usually bilateral and located on the anterior third of each cord. They are related to voice abuse and are initially soft in nature but may progress to become hardened and fibrotic (Figure 2).
Vocal fold polyp
Repetitive vocal cord trauma from voice abuse causes vasodilatation and extravasation of inflammatory fluid creating polyps (Figure 3).

Reinke’s oedema
Smoking and vocal abuse cause inflammatory cells and oedema to collect in Reinke’s space producing a characteristic swelling (Figure 4). If extensive it may appear polypoidal.

Mucosal tears/vocal cord haemorrhages
Severe vocal abuse, e.g. screaming, can occasionally cause tears or small haemorrhages into the vocal folds. These need prompt recognition as they can have devastating effects on voice quality.

Hormonal changes
Premenstrual hormonal fluctuations can produce laryngeal swelling altering voice quality and predispose to vocal cord haemorrhages. European operas often excuse performers from their duties during premenstrual ‘grace days’.

Functional disorders
A performer’s lifestyle often creates significant levels of stress and emotion. This leaves them at considerable risk of developing functional voice disorders. Examination shows a structurally normal larynx, although abnormal movement or muscle tension may be seen. These complaints require early recognition and treatment, not only to aid voice restoration, but to prevent progression to organic disease.

Muscle Tension Dysphonia
As described by Morrison and Ramage (1994),3 inappropriate muscle tension and inadequate relaxation within the larynx can affect the voice and cause problems such as the posterior glottic chink and vocal cord bowing.

Habitual dysphonia
Improper use of the larynx whilst vocalising, not necessarily related to stress, can affect voice quality and stamina and lead to organic problems.

Dysphonia Plicae Ventricularis
This involves use of the false, rather than true, cords during phonation and gives a forced, hoarse voice.

Conversion dysphonia/aphonia
Stress and emotion can be transferred to speech production producing a characteristically whispering voice.

Treatment
Management of voice disorders can be divided into medical and surgical treatments and speech therapy. They are, however, often used in conjunction with each other.

Traditionally, organic lesions of sinister connotation or whose speech therapy has not been effective are managed by surgeons and functional disorders by speech therapists.

A holistic approach must be considered for each patient. Speech therapy should include careful history taking to identify the individual stresses, strains and lifestyle factors relating to the voice disorder being dealt with. Patients should be trained to use and maintain their voices correctly to maximise vocal health and performance. Education is also important in preventing further vocal damage.

Surgical treatment of organic voice disease is well documented in literature. Basic principles must be applied to all of these procedures. Damage to vocal cord mucosa must be minimised and the vocal ligament preserved. Total post-operative voice rest and humidification should be advised for 48 hours and engagements may need to be cancelled for four to six weeks after Endolaryngeal Surgery.

Medicinal conditions, such as reflux laryngitis and chronic sinusitis, can be dealt with appropriately as they arise. General measures including adequate hydration and avoidance of alcohol, smoke and spicy foods should be adhered to.

The acute situation
A difficult situation arises when the performer presents with an acute problem shortly before a performance. Unfortunately, there is no flowchart or protocol that can be followed in every situation. Experience and judgement have to be relied upon. Present and future health, occupational and financial implications must be carefully weighed up and discussed.
A thorough history and examination must be performed, and a decision then made as to advice and treatment. Mucostral tears and haemorrhages are two of the few conditions requiring absolute voice rest to prevent serious voice damage. This should not be prolonged as vocals muscle atrophy occurs after two or three weeks. Vocal fold oedema and inflammation may be successfully treated with steroids and/or topical vasoconstrictors prior to a performance. Antibiotic use can be justified when infection is suspected or may subsequently occur even without confirmation of bacterial aetiology.

These measures should be used in conjunction with relative/modified voice rest where the vocal work of the performer is kept to a minimum. Microphone pick-up rates, accompanying music volume and performance duration can all be altered as well as minimising voice use between performances.

This brief overview of voice disorders and their treatment outlines the breadth of conditions entertainers are susceptible to and the forms of management the otolaryngologist should be familiar with.

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References

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