Cultural competence for the voice and airway surgeon

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Summary

Maintaining the sanctity of the physician–patient relationship grows more difficult as the healthcare industry moves to adopt business models of productivity. Recent interest, however, has helped refocus our attention on the importance of understanding our patients’ backgrounds, and their wishes, in order to create mutually favorable and medically appropriate outcomes. In the business community, emotional intelligence has emerged as a powerful index to predict one’s ability to create customer satisfaction. This article explores how this way of understanding a patient can and should impact the care of individuals who present to a laryngologist, and its principles can be extrapolated to spur discussion about the management of respiratory disorders. The author demonstrates how cultural competence and a participatory decision making style can assist caregivers in designing a treatment strategy for patients.

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Educational aims

• To highlight the importance of developing cultural competence and emotional intelligence to optimize outcomes
• To assist in creating a sense of participatory decision making during patient interactions
• To identify cultural subsets that we sometimes do not appreciate fully

Introduction

The current conceptualization of a voice surgery/laryngology practice is necessarily diverse. Voice and respiratory disorders are commonplace and many laryngologists also treat disorders of swallowing, augmenting an already large practice scope. In addition to large volume, there is an additional complexity created by the very nature of laryngologic disorders. Speech and communication have significant ethno-cultural underpinnings. Disturbances in these functions, therefore, often have cultural ramifications. Also, the integration of respiratory medicine, neurology, and head and neck surgery add a multiple facets to providing appropriate care to laryngology patients. So, it is entirely understandable that any approach to treating...
these disorders will be enhanced by establishing a participatory decision-making (PDM) environment and striving to understand the patient's frame of reference.\(^2\)\(^,\)\(^3\)

There is an appreciable and growing body of evidence looking at the ways in which patients experience their interactions with physicians, and the ways in which suboptimal experiences undermine the basic tenets of delivering healthcare.\(^1\)\(^,\)\(^4\) The concordance of factors such as race, gender, and educational status has been shown to significantly affect the relationships among healthcare providers and the recipients of care.\(^5\)\(^,\)\(^6\) We have learned that training physicians to be culturally competent is a challenge. Further, we know that the examples we set as mentors tend to have greater impact than information received in didactic training sessions. Despite these obstacles, it is clear that we, as providers, must move towards incorporating cultural understanding into how we deliver care.\(^6\)

To implement cultural competence into managed care organizations, three parameters have been defined in the literature.\(^7\) First: physicians must be aware of, and adept at maintaining, cultural sensitivity and cultural appropriateness. Second: epidemiology data, not bias, should help guide approaches to screening and patient education. Lastly: the authors suggested that physicians need to update knowledge of management efficacy as it relates to specific populations. For example, physicians should know whether a particular medication has been shown to work better in African-Americans than in patients of European descent or Indian descent. In turn, clinical research must evolve to include population specific, targeted investigations of pharmaceuticals and therapeutics.\(^7\)

Case reports

Patient 1

A 43-year-old African-American female presented to our institution for evaluation of hemoptysis. She also reported slight difficulty breathing and a sensation that something was stuck in her throat. The preliminary work-up included a normal chest roentgenogram. Both the Pulmonary Medicine and Otolaryngology services were consulted. Flexible fiberoptic laryngoscopy revealed a mass which obscured the view of the glottis. The patient was obese and feared that if she were "put to sleep" that she might "never wake up." Pre-operative evaluation included a detailed description of the anesthetic agents used. Also, the patient was allowed to express each of her fears and our staff provided information in plain language until the patient fully understood current processes and procedures for general anesthesia and surgery, so that she felt comfortable with the surgical and general anesthesia plan. We elected for awake, fiberoptic intubation given the size of the mass. The CO\(_2\) laser was then used to excise the mass without difficulty.

Histology was read as a capillary hemangioma. Immunohistochemical stains for merosin, LeY, and GLUT-1 were unavailable at our institution.\(^8\)\(^,\)\(^9\) Therefore, we requested a review by the Armed Forces Institute of Pathology which confirmed a capillary hemangioma.

Discussion

The role of the physician as patient advocate and translator is evidenced by this case. The patient was extremely fearful of general anesthesia because of reports she had heard about obesity and death secondary to anesthetic agents. Current access to information and misinformation (hearsay, urban myths, media hyperbole) complicates doctors' attempts to convey information in an unencumbered manner. This patient had heard about the infamous Tuskegee experiments from her friends and had general mistrust of the medical community. Sadly, mistrust of the healthcare industry is not uncommon among African-Americans and this group of patients is typically more reluctant to participate in research protocols as a result.\(^10\) The fear that physicians will not be honest and forthright with their patients creates an obstacle to establishing participatory decision-making.\(^11\)

We answered her questions in a complete, clear fashion and helped restore the patient's trust in the medical community. We specifically assured her that her treatment was not experimental, and that we would not withhold information from her at any time. We opted to deliver the information sitting down with the patient in a non-rushed manner. The patient was thankful for the time we spent and the thorough explanation we provided. We were able to proceed with surgery in a timely fashion.

The final pathology was actually atypical for this patient. Hemangiomas are more common in children and more common in Caucasians.\(^12\) This case also illustrates a need for any paradigm to maintain flexibility and openness to the possibility of exceptions. During the post-operative visit, we explained that her case was different than what we often see and we informed her that we would share the information with her primary care provider. She thanked us again for how much time we spent explaining things and stated that she was happy we had taken care of her because she might not have had the surgery otherwise.

Patient 2

A 16-year-old Hispanic-American female was referred for intermittent episodes of stridor. Asthma had been ruled out by methacholine challenge, pulmonary function tests, and history.\(^13\) The presumptive diagnosis was paradoxical vocal fold adduction (PVFAD).\(^14\) Her episodes reportedly lasted in duration from 25 min to 90 min. Her past medical history was remarkable for anorexia and sinonasal allergies. After obtaining parental consent, we collected an exhaustive social history to inquire about her interactions with male family members, interactions with friends, socialization in school, and to determine whether there was any history of experimenting with inhalational substances.

After our evaluation, we opted to treat the patient with botulinum toxin therapy.\(^15\) The initial dose was 2.5 units in both the right and left thyroarytenoid muscle (TA). She gained partial benefit, but was still symptomatic. Next, 10 units were injected unilaterally in the right TA and she achieved complete symptom resolution. She continued working with a speech-language pathologist and has remained symptom free.
Discussion
PVFAD is quite rare, and therefore the cultural competency issues surrounding this diagnosis are obscured by the infrequency with which it is seen. However, there are several points to illustrate. First, the diagnosis is statistically more prevalent in Caucasian females,16 but the compelling history given by the patient and her mother meant that this diagnosis should be pursued. It is important to remember that one of the reasons that the available statistics this disorder as being more prevalent in Caucasian females is because the diagnosis is most frequently made and recorded in this group of patients. Because there are varying levels of patient access to healthcare and tertiary care, the actual number of non-Caucasian patients who have PVFAD might be higher than we know.

Further, there is an association between a history of sexual abuse and somatization disorders, which may include paradoxical vocal fold adduction.17 The historically concurrent diagnosis of anorexia was also considered, and this combination prompted our in-depth inquiry about male family members and interactions with family and friends. The role of the physician expands in this case. We had to be aware of the association between abuse and PVFAD. There is anecdotal information that suggests that victims of childhood sexual abuse who were forced to engage in oral sex have voice airway symptoms develop out of an attempt to re-establish control over oral function.

We also had to consider that body-image issues and eating disorders also have a connection to sexual abuse and also evidence a personality profile that is classic for young, driven, adolescent females who are susceptible of developing PVFAD. Our discussion with the mother also included information so that she could help to manage her daughter’s care better. While the stridor may be impressive, there is minimal risk of desaturation with PVFAD. Intubation and/or tracheostomy are relatively poor choices for this disorder, given the comparative risk to the benefit profile.

Regarding treatment options: we considered the social impact of having intermittent stridor. The patient had difficulty attending church and school and was becoming more isolated and despondent because of the reaction of her teenage peers. Her inspiratory stridor was quite loud and made people around her fearful that she was struggling to breathe. Speaking voice interventional therapy has been shown to be of benefit and the patient was able to breathe through pursed lips and reduce her stridor. We felt, however, that botulinum toxin therapy could provide the most rapid, sustained results and allow her to return to adolescent socialization the soonest.

Patient 3
M.W. is a 57-year-old Caucasian male who presented with a two-month history of hoarseness. He also complained of trouble projecting his voice and speaking loudly. This deficit was of particular concern, because the patient worked in corporate sales and required the integrity of his voice to perform his professional duties. Videostroboscopic evaluation revealed a left true vocal fold lesion with loss of mucosal wave function on that side.

Direct microlaryngoscopy with biopsy confirmed a well differentiated minimally invasive squamous cell carcinoma (SCCA) of the left true vocal fold. Work-up included a CT scan to rule out sub-clinical lymphadenopathy. Staged as a T1A, N0 M0 SCCA, we agreed to treat the patient with carbon dioxide laser excision of the malignancy and close clinical follow-up.18,19 He has remained free of disease for 15 months.

Discussion
Even at the corporate level, salespeople rely on moving products for professional longevity. The selection of radiation therapy as treatment would have necessitated daily sessions for 4–6 weeks, and transit time to and from these sessions would have severely limited the patient’s ability to maintain productivity while receiving therapy. Accordingly, we offered a minimally invasive, endoscopic approach to resect the tumor with a CO2 laser. The procedure was done on an outpatient basis, followed by 1 week of vocal rest during the early post-operative recovery period. There was no cervical lymphadenopathy and the risk of local recurrence and/or late, distant recurrence is small.20

Patient 4
X.X. (to insure anonymity) is a 31-year old female who presented approximately 32 h after an acute change in voice. She was starring in a Broadway theater production and had performed two shows on Saturday. After the show, she was speaking on the phone and had to sneeze. She immediately noticed a change in her voice and become aphonic for a few seconds. She reported that her voice did not return after her sneeze. Videostroboscopy revealed a left true vocal fold hemorrhage and impaired mucosal wave function on that side. The patient was placed on strict voice rest.21,22 After a thorough discussion, we opted to avoid steroids in this case.

Discussion
Though we don’t often recognize the culture of singing, performing artists do pose special management challenges. First, care providers must understand and address the numerous fears about losing one’s voice and income that many singers may not articulate well. Providers should take great care to use understandable language and explain that permanent loss of voice is unlikely in this situation. However, acute injuries anywhere in the body often require resting the specific body part involved to permit proper healing. So, we must not minimize or oversimplify the importance of managing the situation.

Part of the role of the physician’s office is to communicate with show producers, company managers, and show directors. A vocal hemorrhage is a medical emergency in laryngology and prompt voice rest is the treatment of choice. Administrative personnel tend to desire a firm commitment as to when the patient can return to active performance, more often than not viewing the situation as a matter of resuming “business as usual.” Health professionals, obviously, owe allegiance only to the patient. As such, temporizing measures such as the use of topical vasoconstrictors and anti-inflammatory corticosteroid injections
without strict voice rest are not generally indicated for acute vocal hemorrhage.

In this case, corticosteroid use coupled with the voice rest may have accelerated the course of healing and allowed the patient to return to her starring role sooner. However, the possible untoward effects of Prednisone could not be ignored.23 As such, after communication with the patient’s voice coach and the administrative office for the show, we agreed that strict voice rest with serial videostroboscopy was the best course of management for this patient. The challenge was to understand the potentially career ending nature aspect of phonotrauma and consequent vocal hemorrhage. We reassured the patient and arranged for videostroboscopy at approximately 3-day intervals to document the patient’s progress and provide her with visual evidence of her healing.

Patient 5

O.W. is a 57-year old African-American male who presented with a ten year history of recalcitrant, though non-productive, coughing. The cough was worse at night and initiated by a tickle in his throat and concurrent sensation of post-nasal drip. Cough attacks during the day were episodic and variable in duration. However, they tended to be of sufficient severity to interrupt speech, and this interfered with his productivity as director of purchasing at a major medical center.

He had tried several cough medicines without any sustained benefit. Prior work-up included a CT of the neck and chest, multiple chest X-rays, barium swallow, and screening for asthma. His medication list was thoroughly reviewed and Monopril was discontinued. Formal, intradermal allergy testing revealed sensitivities to dust, cockroaches, mold, grass, and tree serums. The results, however, did not suggest extreme or significant sensitivity to any agent and the patient declined immunotherapy as a management option.

When his cough persisted, we began a trial of Neurontin therapy. We began at 100 mg and increased his dose up to 300 mg orally at bedtime. He has remained free of intractable coughing for 2 years now, though when we reduced his proton-pump inhibitor dose, he began experience breakthrough symptoms. Returning to his standard dosing schedule alleviated this exacerbation.

Discussion

This case illustrates the vulnerable position of the larynx and how this anatomic reality dictates evaluation of cough. Allergic rhinitis and post-nasal drip can elicit cough from drainage that descends to the level of glottis before meeting resistance. Likewise, refluxate from the gastroesophageal segment can ascend and create an inflammatory response at the glottic level. Furthermore, the two phenomena are not mutually exclusive. The symptoms of cough and throat clearing have been shown to have predictive value for gastroesophageal malignancies, so these potential diagnoses must be ruled out.24

Neurogenic cough is often not considered by non-laryngologists, and may be under-diagnosed overall.25 In this case, the diagnosis was not easily clarified because of the factors outlined above. However, optimal therapy for reflux and allergic rhinitis failed to relieve his cough. Decreasing laryngeal sensory input using gabapentin, achieved the desired result. A key factor in the physician—patient discussion for this situation is the explanation of an atypical use of a medication.

We anticipated that the pharmacist would explain that gabapentin is classified as an anti-seizure medicine. As such, we carefully explained that a seizure is precipitated by hyperactivity in nerves and that a cough can be triggered by a similar, though not the same, mechanism. The superior laryngeal nerve provides sensation to the larynx and can trigger a cough. Also, if this nerve has a neuralgia, the threshold for coughing lower and it is harder to suppress a cough once it has started.26 We explained that we make use of the ability of Neurontin to calm down hyperactive nerves to help calm down this trigger for a cough.

We also considered that male patients often wait for extremely protracted periods of time between the onset of symptoms and seeking medical care. While the patient had sought help prior to presenting to our institution, the 10-year period of dealing with symptoms had an undeniable impact on his willingness to pursue a new treatment strategy. This relative reluctance heightened the need for us to clearly and plainly explain how Neurontin worked and specifically to note that we would intentionally start at a low dose with the intention of titrating the dose to maximum effect with minimal side effects.

Comments

While much of the information presenting in the preceding cases may seem intuitive when read, it behooves each of us to approach every patient void of a predetermined diagnosis and to appreciate how each patient will receive the information given them. As an exercise, I routinely have patients explain to me the information I just gave them before we conclude the patient visit. I will suffice it to say that much of the intent of my statements is lost in translation and the exercise provides an invaluable opportunity for me to correct misinformation before it settles in the patient’s mind.

The ability to transcend our individual upbringing and combine empathy with our training and clinical acumen is essential to establish trustful, productive, healthy relationships with patients. All our acquired knowledge is useless if we do not develop and maintain the ability to translate knowledge into advice that our patients can receive and incorporate into their daily living.

Conflict of interest statement

There is no conflict of interest.

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Educational questions

Answer the following questions:

1. Management of Paradoxical vocal fold adduction should include all of the following except:
   a. Speech Therapy with breathing exercises
   b. Psychosocial assessment
   c. Botulinum toxin therapy
   d. Tracheostomy
   e. Anti-anxiety medications

2. The best course of therapy for a Broadway star that has an acute vocal hemorrhage is:
   a. Epinephrine spray to vasoconstrict laryngeal vessels
   b. 10 mg IM Decadron to reduce consequent inflammation
   c. Strict voice rest
   d. Antibiotic therapy for hyperemic inflammation
   e. Clinical observation

3. Neurogenic cough typically involves the:
   a. Trigeminal nerve
   b. Glossopharyngeal nerve
   c. Superior laryngeal nerve
   d. Recurrent laryngeal nerve
   e. Pharyngeal plexus

4. A culturally competent physician
   a. Is aware of and maintains cultural sensitivity
   b. Uses epidemiologic data to guide screening and remedies
   c. Maintains awareness of the efficacy of management strategies
   d. Acquires new information about treatment and shares it with patients
   e. All of the above

5. Optimal management of a T1N0M0 squamous cell carcinoma of the glottis can include:
   a. Supracricoid laryngectomy
   b. Vertical hemilaryngectomy with laryngofissure approach
   c. Cisplatin single agent chemotherapy
   d. Intraoperative brachytherapy
   e. Carbon dioxide laser cordectomy

References