

Chapter 1 : Functional Communication - Speech And Language Kids

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Each type of treatment has specific indications and outcomes. Combination of Treatment Approaches for Voice Disorders Typically, voice disorders are addressed with a combination of treatment approaches. For example, patients with voice disorders caused by backflow of stomach fluids to the voice box reflux laryngitis may be treated with both anti-reflux medication and voice therapy. For more information, see Reflux Laryngitis. Treatment Approaches Can Help Most Patients In most cases, voice function can be improved or resolved with appropriate treatment. Medical Treatments Advances in general medicine have also advanced treatment of voice disorders. New anti-reflux medicines provide effective medical treatment for reflux laryngitis. Effective monitoring and treatment of low thyroid hormone levels help patients with voice disorders caused by hypothyroidism. Advances in the use of botulinum toxin, type A as an injected medicine for muscle disorders provides a key treatment option for voice disorders caused by muscle spasm spasmodic dysphonia. For more information, see Spasmodic Dysphonia. Voice Therapy Voice therapy is an important part of treatment for many voice disorders. Voice therapy is designed to treat the most common underlying cause of voice disorders: For more information, see Voice Therapy. Voice therapy is often combined with other treatment approaches. Laryngologists often recommend voice therapy as first-line treatment for voice disorders in which voice misuse or abuse has contributed to long-term irritating injury to the vocal folds, resulting in lesions such as vocal fold nodules, cysts or polyps. Over time, voice therapy can make the lesions much smaller or go away completely. Voice therapy is also indicated when voice misuse or abuse results in vocal fold scarring. For patients who have had surgery to remove a vocal fold growth cancerous or non-cancerous , voice therapy plays a key role in guiding recovery and rehabilitation of voice function. Surgical Treatments Surgical treatments of voice disorders have improved dramatically in recent years. This improvement is due to dramatic changes in surgical techniques based on: Better understanding of voice function voice physiology Better understanding of the impact of voice disorders on voice function voice pathophysiology Better surgical instrumentation Better medical and voice therapies The main surgical approaches to voice disorders are: Surgical techniques that are performed with a microscope for viewing microsurgical techniques and are used to remove vocal fold lesions or abnormalities that hamper vocal fold vibration For more information, see Phonomicrosurgery. Surgical manipulation of voice box framework that improves vocal fold closure, which is important for vocal fold vibration during speaking and singing Injection augmentation: Surgical injection of fat or other substance to add bulk to vocal folds for better vocal fold closure For more information, see Framework Surgery and Augmentation. This is the key first step to any and all treatment plans. Missing one cause may result in less than optimal results. Voice physician or voice care team Voice disorders are best treated by a physician who specializes in voice laryngologist , just as a cardiac problem is best treated by a cardiologist. State-of-the-art treatment strategies Treatment strategies for voice disorders have been greatly improved in recent years. Patients with voice disorders should seek medical consultation for their voice problems, whether these problems are old or new. Frontiers in Treatment of Voice Disorders The state of the art in phonomicrosurgery continues to evolve. The addition of high-magnification binocular microscopy, microsurgical instrumentation, and extended applications of laser technology have revolutionized the status of laryngeal and airway surgery. Advisory Note Patient education material presented here does not substitute for medical consultation or examination, nor is this material intended to provide advice on the medical treatment appropriate to any specific circumstances.

Chapter 2 : Voice and Swallowing Center - Speech Language Pathology - NYEE

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Here is an example of a simple communication board you can make at home: There are many devices out there and now apps that will help a child communicate by speaking a message when they push a button. These types of devices can store many different words and messages so they offer a greater variety of options for the child. Here are some resources on using voice-output devices or apps: Choose New Words to Teach Once you have chosen an appropriate means of communication for a child, you will then want to teach him or her to use that means to communicate. If the child is not communicating much yet, you will want to start by teaching just one or two concepts. Choose things that are highly motivating to the child, such as a favorite food or toy, or a social interaction that the child really enjoys, such as tickling, bouncing, or swinging. Model the New Words Now that you have chosen a word, you will want to model it for him or her as much as possible. Use the word in a variety of different contexts, such as during different activities or times of the day. While you are saying the word, you should also be demonstrating the way that you are expecting the child to use the word. For example, if you want the child to sign the word, then you should sign and say the word at the same time. Or, if you have a voice-output device for the child to use, you should say the word while you push the button on the talker. Children need to hear things many times to learn them and children with language delays take even longer. Provide Temptations to Say the Word Now that your child has been exposed to the word over and over again, you should start setting up temptations that will encourage the child to use the word. For example, put that item high up on a shelf so that they child can see it but not reach it. What do you want? Make sure you use the means of communication that you want the child to use while you say it, such as signing or pointing to the picture. Then, count to 10 in your head again. Wait time is key. Be Patient These are the basic steps. You simply need to keep doing this until the child is able to use that method of communication. Just keep trying, eventually he may be ready to communicate to you. If you are working with a child who tries to speak but is unable to be understood due to significant speech errors, you should most definitely be working on those speech sounds while you work on achieving some functional communication. Here is some information on teaching speech sounds: Check out this post on using video modeling:

Chapter 3 : Treatment Options

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She has worked as a speech-language pathologist in a wide variety of clinical settings, including intensive and acute care, rehabilitation, extended care hospitals, private practice, and home health care. Introduction The Workbook of Activities for Language and Cognition 6 WALC 6 was developed to provide a comprehensive series of tasks and functional carryover activities allowing for integration of language and cognitive skills for neurologically-impaired adolescents and adults with diverse levels of functioning. The activities in the following sections can be adapted for clients with a variety of functioning skill levels. Temporal Orientation Clients with neurological impairments often exhibit difficulty planning their days, understanding how long it takes to do something, using a calendar, and planning a schedule. The tasks in this section focus on recognizing, understanding, and using time concepts for everyday activities. Spatial Orientation Clients with damage to the non-dominant hemisphere can demonstrate decreased ability to localize objects in space and show diminished capacity to determine spatial orientation. This section includes tasks structured to target spatial awareness and visual awareness. These tasks can also be used to integrate memory, problem solving, verbal naming, and following written and oral directions. Nonverbal Communication The tasks in this section focus on developing strategies to facilitate nonverbal expressive communication for those clients who have lost the ability to produce speech or verbalize in a meaningful and effective manner. Specific gesture and pantomime exercises are included as well as activities for functional carryover and expansion of these skills. Oral Motor This section is designed for those clients who demonstrate dysarthria a weakness or incoordination of the speech muscles or verbal apraxia an impairment in the sequencing of speech sounds. Specific oral-motor exercises are included, along with sound specific exercises, ranging from the single word level through the sentence level. Many of the tasks in this section can be used two ways: The tasks are broken down to target a wide range of skill levels, ranging from the single word level through the structured and unstructured conversation levels. Auditory Comprehension Following neurological trauma, clients will often show deficits in understanding spoken language. The tasks in this section cover a wide and diverse range of receptive abilities, and provide for flexibility by using a continuum of skill levels. Exercises progress from single word comprehension and discrimination to comprehending and recalling multiple paragraph information. Attention and concentration, memory, reasoning, problem solving, and deduction can also be integrated in many of these exercises. Reading Comprehension Clients may have problems reading due to comprehension impairments, visual deficits, or both. Tasks cover the isolated letter level all the way through the paragraph and functional reading level, with an incremented progression of reading comprehension and visual field awareness skills. These tasks can also be used to integrate cognitive skills, including attention, concentration, and memory. I recommend that you take a close look at the "Suggested target areas" within each section, and to always consider which target areas might be integrated to maximize the functionality of each task. It is my hope that you find the tasks in this book to be practical and effective. It was the unique qualities of my clients that prompted me to write WALC 6, and to them I am thankful and honored to have experienced speech, language, and cognitive rehabilitation with them.

Chapter 4 : Speech Therapy. An Introduction to Speech Therapy | Patient

Introduction to Functional Voice Therapy Lecture VII Therapy of the Singing Voice II. Related Articles for "" Weiss D.A.: Introduction to Functional Voice Therapy.

Grabscheid Voice and Swallowing Center of Mount Sinai We help people communicate more clearly, more easily, more effectively, and more beautifully. We provide a wide range of individualized medical, surgical, and therapeutic treatments for disorders related to the larynx, throat, and vocal cords in adults and children, as well as for transgender individuals. We also accommodate the needs of performers or business presenters who may be visiting New York and suddenly experience an urgent vocal problem. In addition, our team of specialists is available for supplementary consultation for those already working with an otolaryngologist, voice therapist, singing teacher or speech coach. We treat them all. The Center provides expertise in neurolaryngology, including the latest diagnostic technology, such as laryngeal electromyography EMG and videokymography. We treat vocal disorders with medication, surgery, or voice therapy, which involves vocal and physical exercises coupled with behavioral changes. At our Swallowing Laboratory which employs the latest technological advancements in diagnosis and treatment, we carefully evaluate and treat patients to prevent complications, such as dehydration, malnutrition, choking, and pneumonia. Treatments include compensatory posturing, thermal stimulation, therapeutic exercises, and electromyography monitoring devices, as well as medical and surgical approaches. Rehabilitation after Head and Neck Cancer Patients who have been treated with surgery or radiation for head and neck cancer may experience speech and swallowing difficulties. Our compassionate speech language pathologists SLPs, sometimes referred to as speech therapists help patients restore voice function after treatment for various head and neck cancers, including cancer of the mouth, throat, larynx voice box , salivary glands, paranasal sinuses and nasal cavity nose , and lymph nodes in the neck. The road to recovery can often be a long one and our speech therapists meet with patients before cancer treatment to establish a relationship, to obtain baseline data on their speech and swallow muscles, and to counsel them on structural, functional, and lifestyle changes that may result from cancer treatment. Following cancer treatment, speech therapists work with patients to help them regain their ability to communicate. Patients who had total laryngectomy surgery removal of the voice box , will receive counseling on latest approaches to speech rehabilitation. In addition to helping patients select the most appropriate device, SLPs offer training to help them use it effectively. Finally, we teach patients to speak in a new way that circumvents any disabilities that may result from cancer treatment. Approaches to speech include the following: Esophageal speech requires air injected or inhaled into the upper part of the food pipe esophagus to produce a sound that is shaped into speech via articulators. It can be a difficult technique to learn, but it does not require devices or prostheses and speech sounds more natural. A voice prosthesis is inserted into a surgically created fistula small puncture between the trachea windpipe and the esophagus food pipe , keeping food out of the trachea but allowing air into the esophagus for speech. The TE puncture can be created during laryngectomy surgery or later. We offer a robust plastic surgery program that includes trans-feminine and trans-masculine facial and body procedures. The specialized teams of laryngologists and voice and speech therapists at Grabscheid Voice and Swallowing Center work collaboratively to help transgender individuals find their voice. Our vocologists are specialists in treating the professional voice for actors, singers, performing arts students, teachers, lawyers, and others whose careers depend on their voice. Depending on the case, our patients may benefit from access to groundbreaking studies.

Chapter 5 : Voice and Voice Therapy, 9e

List and describe the kinds of voice disorders. Describe the incidence and prevalence of voice disorders in the general population. Describe the incidence and prevalence of voice disorders in specific populations.

Voice quality is the continuous background to speech production, which involves a complex physiological functional and anatomical structural system. Individuals with voice disorders range from a simple case of laryngitis that usually resolves spontaneously to more sinister physical or organic conditions such as laryngeal malignancy. The main symptom in people with voice disorders is hoarseness or dysphonia, which describes an alteration in voice quality. Definition of voice disorder It is difficult to define a normal or abnormal voice quality. A voice disorder may also exist when the structure of the laryngeal mechanism, the function, or both no longer meet the voicing requirements of the speaker. In medical practice, hoarseness is described as a symptom of laryngeal disorder, which is often the first and only signal of disease, local or systemic, involving this area. Classification of voice disorders Voice disorders can be classified as organic and non-organic; the latter are often referred to as functional or psychogenic types. In organic voice disorders, the faulty voice is caused by structural or physical disease of the larynx itself, or by systemic illness that alters the laryngeal structure. Organic disorders of vocal mechanisms that may result in voice problems tend to arise from the more superficial structures of the vocal fold, the epithelium lining and the superficial layer of the lamina propria the layer of the vocal fold just below the lining. Those arising from the lining include white patches keratosis, leukoplakia, wart like growths papillomas and sinister ones carcinoma. Voice problems associated with systemic illnesses i. Voice changes are also seen in some patients with tremors Parkinsonism and hypothyroidism. Changes of the environment outside the larynx for example, due to acid reflux or a post nasal drip due to sinusitis can irritate the laryngeal lining and cause hoarseness. Functional or non-organic voice disorders are non-physical in origin or result from faulty habits of voice use. The voice sounds abnormal despite normal laryngeal anatomy and physiology. These include nodules Fig. Vocal cord nodules and polyps usually arise from trauma and changes in the basement membrane zone of the epithelium. Psychogenic voice disorders include musculoskeletal tension disorders and conversion voice disorders: Evaluation Diagnostic evaluation This includes a thorough history taking and physical, laryngeal and perceptual evaluation. The primary objective of the diagnostic voice evaluation is to discover the causes of the voice disorder, and to describe the nature of the vocal symptoms in order to assist the laryngologist and the voice team in making a differential diagnosis and recommending appropriate treatment. The differential diagnosis begins with categorising the abnormal voice on the basis of laryngological, physiological and neurological evidence. Physical evaluation Voice evaluation includes a history of the voice disorder, including details of previous voice problems, the onset and the current disorder and its course, as well as events associated with the onset. The occupation of the patient determines the level of voice usage. The laryngologist carries out a comprehensive otolaryngological ENT examination. This includes neck examination, laryngeal palpation and examination. Techniques such as video stroboscopy Fig. Rigid and flexible laryngoscopic assessment with stroboscopic light helps in documentation of the laryngeal anatomy; any asymmetry and changes in vocal cord movements are recorded. The attention to detail helps in diagnosing lesions which can be often missed with cursory and mirror laryngoscopy like small subepithelial cysts and sulci. Perceptual evaluation The acoustic analysis of voice production permits a quantitative analysis of the multidimensional physical characteristics of the voice signal and an inference about the underlying physiological mechanism. Acoustic characteristics of the normal voice are age and sex-dependent; they are analysed during sustained phonation tasks and during continuous speech. Simultaneous acoustic, laryngoscopic or electro-laryngographic measures may be used to confirm the nature of phonatory events. Electro-laryngography which analyses vocal cord vibrations by measuring electrical activity of the larynx gives information about the action of the vocal cords by using non invasive procedures. Quality of life measures in the form of questionnaires have become increasingly important in evaluation of the voice patient, and of the efficacy of treatment. Radiological and haematological investigations All patients with voice disorders require objective assessment and measurement

of vocal function as discussed above. In addition radiological tests are helpful in the diagnosis of voice disorders. Specific haematological tests such as thyroid function tests are also useful where hypothyroidism is suspected. Management of voice disorders There are three general approaches to the management of voice problems: It is often the case however, that optimal treatment requires the use of a combination of treatment types. Surgical management phonosurgery is considered the more radical form of intervention aimed at improving voice quality. Medical management The medical approach to the treatment of voice disorders refers to non-invasive techniques which do not involve surgical removal, reconstruction or alteration of tissue. Acute laryngeal problems in which the vocal cords demonstrate redness, swelling or irritation for example those resulting from gastro-oesophageal reflux and allergy will be medically treated. Proton pump inhibitors used to control and treat acid reflux play an important role. Surgical management phonosurgery Surgical management of voice problems can be differentiated into techniques that are broadly related to hyperfunction or hypofunction of the larynx. Hyperfunction of the larynx results in discrete pathology which is as a result of increased activity e. A thorough understanding of the structured micro-anatomy of the true vocal cord is implicit to effective management. Hypofunction of the larynx occurs where the laryngeal function on one or both sides may be compromised, e. Hyperfunctional or discrete benign pathology is surgically managed by surgical removal of affected tissue with minimal to no resection of uninvolved structures. Many of these lesions, with the exception of nodules and some polyps arise from the superficial layer of the lamina propria, with relative sparing of the epithelium and basement membrane zone. Surgical exposure is through a small incision immediately adjacent to the affected tissue: Every effort is made to avoid disruption of the underlying vocal ligament. The dissection is precise respecting the medial vibrating cord of the vocal cords to ensure optimal vocal function postoperatively Figs. There is some controversy regarding excision of nodules and polyps. Some authors espouse a sub-epithelial approach to excision while others recommend direct excision including the epithelium, but resection to be limited to the lesion with limited to no excision of underlying superficial layer of lamina propria. The crucial issue is to cause as little damage as possible to the underlying structures. I prefer cold steel instruments, this does not result in collateral thermal damage and the specimen can be analysed histologically for a tissue diagnosis. Surgery for hypofunctional disorders usually encompasses surgery for glottal incompetence where the two vocal cords are unable to approximate in the midline which is a requirement for normal phonation. The aim is to create a smooth, pliant platform against which the other vocal cord can optimally vibrate and which will allow for generation of a symmetrical mucosal wave. Two main surgical approaches are used a external " laryngeal framework surgery and b endolaryngeal; each of value in differing clinical scenarios. Laryngeal framework surgery involves manipulation of the tension and position of the vocal cord through changes in the framework of the larynx. The surgical management can be carried out under local or general anaesthesia. Local anaesthesia for external approaches involves injecting around the neck crease incision and underlying soft tissue. Although the patient is mildly sedated, the advantage of local anaesthetic procedure is the ability to fine tune the voice in an awake patient. General anaesthesia GA is offered where the procedure is planned to last longer and majority of endolaryngeal procedures are carried out under GA. External approach External approaches to treating voice disorders were championed by Professor N Isshiki from Kyoto, Japan who pioneered laryngeal framework surgery in the s. These approaches have more recently been refined by many surgeons. Silastic, Gore-Tex, hydroxyapatite, titanium and many other materials have been used as implants; the key issue is bringing the affected vocal fold towards the midline " a process called medialisation whereby the gap between the two vocal cords is closed and air leak is minimised; this results in a stronger voice. Internal approach Endolaryngeal approaches for glottic immobility were popularised in the s by Arnold through the injection of Teflon directly into the immobile vocal fold. The use of Teflon over a period of time gave rise to a number of complications including stiffness and granuloma formation, often many years following the injection. This has led to the development of other injectable materials, with the common goal of finding a lasting bio-compatible material with viscoelastic properties similar to the superficial layer of the lamina propria, or that can be injected deep within the paraglottic space to medialise the vocal fold without long-term complications. I find Bioplastique Silicone " Polydimethylsiloxane gel mimics closely the properties of the superficial lamina

propria and give predictable long term results. Medialisation of a paralysed right vocal fold is achieved with Bioplastique injection Figs. A variety of techniques can be used in the treatment of voice disorders: Relaxation reduces musculoskeletal tension in the laryngeal area Breathing exercises optimise breath support for the voice. Various phonation exercises promote soft initiation of vocalisation, rather than hard glottal attack. Attention is paid to pitch, volume and rate of speech, to ensure that these are used appropriately. Voice therapy also aims to reduce stress factors that drive the individual into patterns of vocal misuse. In non-organic voice disorders involving excess musculoskeletal tension, treatment is based on the principle that reduction in muscle tension allows the larynx to return to its normal phonatory ability. This is achieved by mechanical relaxation of musculature and psychological release of any anxiety causing or associated with the tension. In organic disorders, the main principle of therapy is either muscle strengthening or adaptation to the mechanical problems through compensatory phonatory and respiratory manoeuvres. Conclusion Voice disorders encompass a wide variety of conditions from different aetiological groups like infective, inflammatory, structural, traumatic, mass lesions - benign and malignant, neurological, endocrinal, vascular, autoimmune to name a few. The management involves a thorough understanding of the laryngeal function, diagnostic evaluation with attention to detail and a multidisciplinary team approach in treatment. Various conditions caused by exaggerated reactions of the immune system hypersensitivity reactions to a variety of substances. Full medical glossary A medication that reduces sensation. Full medical glossary Withering or weakening of a body tissue due to disease or disuse. Full medical glossary Not dangerous, usually applied to a tumour that is not malignant. Full medical glossary A fluid produced by the liver, which helps the fat ingested in food to combine with the digestive juices in the gut. Full medical glossary A malignant tumour cancer that is formed from the epithelium, the tissue that covers the open surfaces of organs. Full medical glossary A condition that is linked to, or is a consequence of, another disease or procedure. Full medical glossary The abbreviation for computed tomography, a scan that generates a series of cross-sectional x-ray images Full medical glossary A fluid-filled, enclosed pouch developing in a bodily structure as part of a disease process Full medical glossary Feelings of sadness, hopelessness and a loss of interest in life, combined with a sense of reduced emotional well-being Full medical glossary The process of determining which condition a patient may have. Full medical glossary The specialisation of cells or tissues for a specific function. Full medical glossary A means for the continuous injection into a vein. Full medical glossary Examination of the inside of the body using a tube equipped with a light source and either a small camera or an optical system. Full medical glossary The abbreviation for ear, nose and throat. Full medical glossary Relating to tissues surrounding tubes and cavities in the body. Full medical glossary The outer layer of cells covering the open surfaces of the body, both over external surfaces and lining hollow structures. Full medical glossary The removal of a piece of tissue or an organ from the body. Full medical glossary A viral infection affecting the respiratory system. Full medical glossary The basic unit of genetic material carried on chromosomes. Full medical glossary A benign growth formed of immune cells, usually produced in reponse to infection, inflammation or injury.

Chapter 6 : Creating a Functional Therapy Plan: Therapy Goals & SOAP Note Documentation – Smart S

Multiparametric Assessment of the Efficacy of Voice Therapy in the Management of Hyper functional Voice Disorders
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You are free to copy, distribute and transmit the work, provided the original author and source are credited. This article has been cited by other articles in PMC. The decrease of intelligibility, a reduced vocal stamina, the stigmatization of a conspicuous voice and manner of speech, the reduction of emotional expressivity all mean greatly diminished quality of life, restricted career opportunities and diminished social contacts. Intensive therapy based on the pathophysiological facts is absolutely essential: Functional exercise therapy plays a central role; according to symptoms and their progression it can be complemented with prosthetic and surgical approaches. In severe cases communicational aids have to be used. Definition and introduction Oral or spoken communication belongs to the elemental functions of human existence. It is made possible by the ability to produce differentiated sounds, an acoustically perceptible way of conveying information. The function of the organs participating in speech can be compared with the construction of an organ pipe: The fast sequence of sounds during speaking requires a highly complex pattern of movement of all active muscles which has to be timed with the utmost accuracy. Speech disorders caused by sensorimotor impairments of the articulatory movements are called dysarthria. The articulatory movements of patients suffering from dysarthria are characterized by weakness, reduction in speed, malcoordination, altered muscle tone or by dyskinetic symptoms. Speech disorders caused by structural changes of the speech organs - in adults mostly after surgical and radiochemical treatment of tumors - are called dysglossia. The decrease of intelligibility, a reduced vocal stamina, the stigmatization of a conspicuous voice and manner of speech, the reduction of emotional expressivity have grave consequences: Aetiology and pathogenesis of dysarthric disorders Among the causes that lead to disorders of the dysarthric type are all neurological diseases of the muscular-skeletal system; here either the motor structures of the CNS or the lower motoneuron can be affected. CNS structures in which damage is relevant are areas of the sensorimotor cortex, the cortico-nuclear tracts descending from these areas to the brain stem, the reticular formation, the polysynaptic segmental motor tracts including thalamus and basal ganglia, and the cerebellum. Dysarthria also occurs when the lower motoneuron is damaged the nuclei of the cranial nerves V, VII, IX, X and XII or these cranial nerves themselves; the cervical nerves C1 to C8, the thoracical nerves T1 to T12 and the structures of the neuromuscular junction or when the muscular system is injured. Speech disorders connected with isolated peripheral paresis are classified by some authors as dysglossia; for further differentiation within the terminology which is not standardized please refer to the relevant specialist literature [1], [2]. Depending on its location central damage leads to disorders analogous to motor disorders of the extremities: Disorders caused by central damage are very often characterized by the fact that several functions of speech production are affected: If the damage is so severe that no articulatory movements are possible at all, the term used is anarthria. The most common diseases accompanied by dysarthria are listed in Table 1 Tab.

Chapter 7 : Chapter 1: An Introduction to Voice Disorders and Their Management

Also, whilst functional dysphonia has no organic cause, if the person experiencing the voice difficulties does not eradicate harmful vocal patterns appropriately or efficiently, this can lead to secondary difficulties that may then result in organic changes.

References Discussion DSI has been considered as a robust and reliable measure and has been used frequently in the several efficacy studies. This parameter has been reported as a good correlate of perceptual dysphonia severity. In the current study this parameter was used to document the changes in voice quality across the therapy sessions in participants with hyperfunctional voice disorders. The present study hypothesized that an eclectic voice therapy program comprising of patient education along with systematic implementation of symptomatic voice therapy approaches could promote better prognosis in individuals with HFVD. In order to verify the hypothesis, 20 participants in the age range of years diagnosed with HFVD by a team consisting of a Laryngologist and a Speech Language Pathologist were considered for the study. Outcome of the therapy was documented before commencing the therapy baseline and following every two sessions during the therapy using the objective parameter dysphonia severity index DSI. Results related to the DSI revealed several points of interest. The first point of interest was the variation among the baseline DSI value across the participants. Among the twenty participants, the DSI value varied from negative to positive with lowest and highest value being This indicates that the severity of voice disorder and dysphonia varied across the participants. This can be attributed to the pathological variations among the participants. Although all the participants included in the study were with hyperfunctional voice disorders, there was variation with respect to the extent and type of abnormal glottic and supraglottic activity. While some participants exhibited excessive muscular activity at the level of glottis as well as in the aryepiglottic folds and ventricular folds, others had only supraglottic hyperfunction with normal glottic closure. While some had normal vocal fold edge, eight of the participants had early vocal nodules. This difference in the type and severity of vocal pathologies across the participants explains the variation in the baseline DSI value across participants. The baseline variations in DSI can also be attributed to the variations in its constituent parameter maximum phonation duration. The maximum phonation duration of an individual reflects the breath support i. There were variations in the pattern of breathing and respiratory-phonatory control among the participants. The participants breathing patterns included predominantly thoracic with clavicular and abdominal in some of them. These differences would have lead to the variations in the maximum phonation duration and in turn the overall DSI value of the participants at baseline. These findings are in consonance with that of Van Lierde et al. Even in the phononormic individuals DSI was shown to vary widely from 3. The second point of interest that was observed was the variation in the DSI value across the voice therapy sessions. Although there were individual variations in terms of the magnitude of improvement observed, the DSI value of all the participants moved in positive direction indicating improved voice with proposed EVT program. De Bodt et al. The improvement in the overall DSI value can be attributed to the improvement in the respiratory capacity, respiratory-phonatory control, the relaxed laryngeal frame work and improved vocal stability. Similar enhancement in DSI value was reported by Van Lierde [16] using combination of classical approaches such as chant talk, open mouth approach, along with establishing abdominal pattern of breathing and repeated laryngeal manipulation. They also reported improvement in acoustic measures higher frequency, fundamental frequency, and perturbations, with jitter and shimmer reaching normalcy in almost all the participants. Similarly, Amir, Wingate et al. Roy, Leeper et al. The improvement observed in the DSI indicates the change in voice quality. This can be attributed to many factors. According to Aronson [8], the chronic posture of the larynx in an elevated position results in cramping and stiffness of the hyolaryngeal musculature and a direct therapy approach such as circum laryngeal manual therapy directly reduces laryngeal tension thus resulting in an immediate improvement in voice. In the current study, pre-therapeutic palpatory evaluation revealed all the participants having elevated tension in the strenocleidomastoid muscles and supralayngeal musculature involving mylohyoid and geniohyoid. In addition majority of the participants demonstrated elevated vertical laryngeal height at rest and on phonation indicating

the typical features of muscle tension dysphonia. Laryngeal manual therapy LMT was used in the current study for the purpose of relaxation of laryngeal and perilaryngeal musculature. As the steps used in LMT such as massing sternocleidomastoid muscles and kneading the supralaryngeal musculature are similar to the described by Aronson [8], the improvement in the voice quality as observed on improved DSI value could be attributed to the altered laryngeal framework following LMT. According to Pettersen et al. This explains the influence of massaging the major muscle of the neck sternocleidomastoid on the overall relaxation of the laryngeal framework. Further, improvement in the body posture and change in the respiratory patterns were reported to contribute to the decreased tension in the suprahyoid area, which in turn relaxes the larynx and lowers in vertical position [22]. Therefore, using an eclectic voice therapy program with combination of respiratory, phonatory and resonatory exercises in the current study could also have facilitated laryngeal relaxation by developing balance across these sub systems of voice production. The third point can be the change of DSI with progression in therapy sessions. This indicates the deterioration in voice quality initially with voice therapy which moved positively only after their third therapy session i. This could be attributed to the sensitivity that the participants gained following vocal hygiene education in the first two sessions. During these two sessions, the participants were educated on vocal hygiene aspects such as the ill effects of producing effortful voice, phonating on end of the breath, use of breathy attack for initiation of phonation. Therefore, it might be possible that the participants were not using the abnormal compensations, thus reducing the maximum phonation time, highest f0 and thus reducing the overall DSI value. Further, increase in the DSI value at third observation could due to the introduction of systematic implementation of laryngeal manual therapy and other indirect voice therapy approaches. This finding is consistent with that of Mathieson, Van Lierde et al. Similar positive effects using an eclectic voice therapy program was reported by Singh et al. The voice therapy included five aspects. Another study by Rangarathnam et al. Positive effects were found in the perceptual and voice related quality-of-life outcomes. In case of remaining eight participants, although they improved from their baseline DSI, did not reach the reference value of DSI with six sessions of therapy []. These participants however, continued voice therapy programme despite reaching the normal DSI value, as they were to achieve the ease of voice and to be normal in terms of perception. The variations in terms of the number of sessions taken to reach normalcy can be based on several vocal related and unrelated factors. The vocal related factors include their variations with respect to the vocal pathology and the degree of dysphonia at baseline. However, the non vocal factors such as motivation, practice, professional vocal demands, vocal loading could also have lead to the variation in the magnitude of prognosis.

Chapter 8 : Treatment of Voice Disorders

therapy by an experienced speech-language pathologist remains an effective short-term treatment for functional dysphonia in the majority of cases, but less is known regarding.

This article has been cited by other articles in PMC. Abstract Background Articulation disorders in young children are due to defects occurring at a certain stage in sensory and motor development. Some children with functional articulation disorders may also have sensory integration dysfunction SID. Hence, the purpose of this study was to compare the efficacy of speech therapy in two groups of children with functional articulation disorders: A total of 30 young children with functional articulation disorders were divided into two groups, the no-SID group 15 children and the SID group 15 children. The number of pronunciation mistakes was evaluated before and after speech therapy. The mean and standard deviation in the pre- and post-test number of mistakes in pronunciation were Speech therapy can improve the articulation performance of children who have functional articulation disorders whether or not they have SID, but it results in significantly greater improvement in children without SID. SID may affect the treatment efficiency of speech therapy in young children with articulation disorders. Articulation disorders are difficulties with the motor production aspects of speech, or an inability to produce certain speech sounds. Many young children with speech disorders have reduced functions in the vestibular, proprioceptive, and tactile sensory systems compared to normal children. Ayres hypothesized that sensory integration dysfunction SID is related to the processing ability of the central sensory system. Sensory integration involves the ability to perform motor actions after integrating sensory input. Therefore, some children with functional articulation disorders may also have SID. A study by Gierut showed that most children with articulation disorders showed good improvement after proper therapeutic interventions, including: Materials and methods Participants The study subjects were recruited through the rehabilitation clinic of a medical center in southern Taiwan. Based upon the findings of two previous studies defining the suitable age range for speech therapy intervention in preschool children, 15 the inclusion criteria included: The exclusion criteria included the following three conditions: We excluded subjects who visited other hospitals for speech therapy while receiving the therapeutic intervention in this study. This study was approved by the hospital Institutional Review Board and the study complied with the tenets of the Declaration of Helsinki. Before inclusion, the parents of the subjects fully understood the objective of the study, agreed to participate in the study, and signed the informed consent. A total of 35 children were screened for inclusion. Three children were excluded due to developmental delay, and another two due to cognition impairment. The study was designed prospectively, and a total of 30 children were enrolled in this study. Procedures For children who fit the inclusion criteria, the following assessments were performed before therapeutic intervention: Based on the results of the SIF, subjects were divided into two groups. Those who scored below 85 out of were assigned to the no-SID group; those who scored 85 and above were assigned to the SID group. After group assignment and parental agreement to comply with the therapy, therapeutic intervention began. The speech therapist who performed the Clinical Test of Articulation was not informed of the group assignments or the purpose of this study. Intervention protocols The basic principles of speech therapy for functional articulation disorders include: The speech therapist who administered therapeutic intervention was not the speech therapist who administered the assessments. The test includes two sets of questions for diagnosis and screening. Up to infants and young children in Taiwan were used as the standardized sample to establish the diagnosis test, including the overall development and specific development according to age score, percentile, and developmental quotient in 30 age groups, as well as the z-score of seven age groups given the screening test. The questions in the diagnosis test have a test-retest reliability coefficient of 0. In validity testing, the correlation coefficient between each subtest and the overall score is between 0. The correlation between subtests and overall score is 0. In this study, the screening test was used to exclude cases with developmental delay. The scale contains 98 questions, which take approximately 20 minutes for a main caregiver to answer. The evaluator must have been the main caregiver for at least 6 months. Children aged 3â€”6 years are given the preschool version of the scale, while children aged 7â€”10 years are administered

the school-age version of the scale. Each question is scored on a five-point Likert-like scale, for a total score of 98 points. Higher scores indicate poorer sensory integration function, while lower scores indicate sensory integration function approaching normal. The original sum score can be converted into a percentile rank based on the norm reference table. This research tool has high test-retest reliability 0. To verify the objectivity of the results, reliability and validity testing were performed using 10 young children with functional articulation disorders. One therapist utilized both tests for evaluation; the other used only the Clinical Test of Articulation. The results of numbers of mistakes in pronunciation were compared with those of the Mandarin Consonant Articulation Test for Preschool Children for examining criterion-related validity. Interrater reliability was verified with the intraclass correlation coefficient ICC. The ICC value obtained 0. Independent t-test and Chi-square test were used to test the difference in age, pretest number of mistakes in pronunciation between the two groups, sex, sibling order and education of parents. One-way repeated measures ANOVA was used to examine the difference in the mean number of mistakes in articulation in the two groups before and after treatment. A total of 30 subjects were recruited, and each group had 15 children. These results demonstrated the homogeneity of the two groups before speech therapy. Table 1 Demographic and baseline data of participants Group.

Chapter 9 : Speech Therapy for Adults - Functional Therapy of Alaska

Voice therapy is designed to treat the most common underlying cause of voice disorders: voice misuse and abuse. (For more information, see Voice Therapy.) Voice therapy is often combined with other treatment approaches.

Chronic cough, throat-clearing, and irritable larynx Breathing disorders of the upper airway The Evaluation Process At the Lions Voice Clinic, your voice evaluation is interdisciplinary, that is, the laryngologist and speech-language pathologist evaluate you together, at the same time. We discuss the problem thoroughly with you, gathering information about the history of the problem, and your complaints and needs. This also includes a thorough examination of our ear, nose, and throat. The Laryngeal Examination The examination of the larynx is a fundamental part of the evaluation. This may be done in a number of ways. Most often, we video-record the examination of the larynx, in order to have a document of the results. Also, it is often desirable to have you view your own larynx in action, in order to better understand your voice disorder. The examination may be done with either flexible or rigid endoscopy, or both. The flexible endoscope is passed through the nose and into the throat, allowing a full view of the larynx in action. The rigid endoscope is inserted into the mouth and straight back, functioning like a submarine periscope to view the vocal folds. The rigid endoscope is larger, offering a larger, brighter view of the larynx. However, the flexible endoscope, being passed through the nose, allows you to talk and sing during the procedure. This is vital in assessing the function of the vocal mechanism. An endoscope consists of a lens at the end of fiberoptic cables that carry light to the dark insides of the human body. The image is viewed through an eyepiece. In the Lions Voice Clinic, the endoscope is attached to a video camera. This allows the image to be projected onto a video monitor during the exam, and videorecorded for replay. We can make single still pictures from the examination for you, or dub the entire recording onto a DVD, or copy it to your flashdrive. An additional feature of the endoscopic exam is called stroboscopy. In this case, the light carried through the fiberoptic cables is a strobe light, which shines intermittently on the vibrating vocal folds. The vocal folds vibrate anywhere from 80 to times per second; the faster the vibration, the higher the pitch of the voice see Vocal Fold Vibration and Pitch in our page About the Voice. These vibrations are so fast, they can only be seen as a blur. This allows an evaluation of the nature of the vibration, which is crucial to understanding many abnormalities of the vocal sound. In the Lions Voice Clinic, we use stroboscopy to assess voice disorders. Regardless of who performs your endoscopic examination a speech-language pathologist or a laryngologist , we always review your examination together, along with you. Determining the cause of the problem and the treatment plan is a team event. The nature of the disorder determines what kind of treatment is recommended. Medical Treatment Treatment using medicines is one of the components of treatment for voice disorders. In some cases the laryngologist will prescribe a medication to make the larynx more healthy. We may also suggest over-the-counter medications for certain vocal conditions. There are few drugs specifically used to treat voice disorders. More commonly, the medications fall into several classes that have a secondary effect on the voice: Medications to treat sinus drainage Decongestants, antihistamines, or steroid nasal sprays may be prescribed if the individual is bothered by congestion or sinus drainage that may irritate the tissues in the larynx, or thicken secretions, making it hard for the vocal folds to vibrate. Medications to treat acid reflux Reflux is a common disorder that can cause acid from the stomach to reflux up the esophagus the food pipe and then spill over onto the larynx see About the Voice. The acid is irritating to the larynx and may cause swelling or inflammation of the vocal folds. Medications such as Zantac or Prilosec may be prescribed to treat this condition, in order to improve the health of the larynx see Related Disorders. Medications to reduce inflammation of the vocal folds On some occasions, vocal fold swelling warrants a prescription of oral steroids to reduce the inflammation. These are not used on a long-term basis. This is available over the counter. Over-the-counter medications Conservative remedies are important at the Lions Voice Clinic. Maintaining good hydration of the mucosal tissues is extremely important to vocal health. We often recommend such strategies as saline nasal irrigation, personal steamers, and sucking on hard candies. Also, over-the-counter medications such as saline nasal sprays or guaifenesin as in Mucinex are helpful in keeping drainage minimal and secretions thinned. Surgical

Treatment Certain voice disorders are best treated with surgical intervention. Some lesions growths need to be surgically removed. In the case of vocal fold paralysis, there are several surgical options that provide a better voice. Goding and Misono are known internationally for their skills as surgeons. At the Lions Voice Clinic, surgery is almost always accompanied by at least one session of functional voice therapy, to teach the individual about postoperative voice care, and to teach vocal techniques to optimize the surgical result. Surgical treatments for each voice disorder are described on the Voice Disorders page. Also known as voice therapy. Much like physical therapy, progressive exercises are taught over a series of sessions. Includes education about use and care of the voice and how the voice works. Varies in length from a single session to many sessions over several months. Should be done with a certified speech language pathologist with special expertise in voice disorders. Often done in conjunction with other kinds of treatments. If voice treatment includes surgery, it should always include at least one session of functional treatment to learn techniques for optimal healing. At the Lions Voice Clinic, functional therapy is done with Dr. After the voice evaluation, we discuss your treatment plan with you, and therapy sessions are scheduled. The plan for therapy varies from patient to patient, but in general, the first three to four sessions are an hour long, and a week or two weeks apart. Sessions become gradually more spaced apart as you learn more advanced techniques and need more time to practice them and incorporate them into day to day speech. In therapy for voice disorders, a typical process in the first few sessions would include: In the Lions Voice Clinic, we tailor the exercises specifically to your strengths, weaknesses, and needs. We record the exercises during the session so you can practice at home with recording. This ensures optimal practice.