DOWNLOAD PDF MANAGEMENT : PHONOSURGERY

Chapter 1 : Ear, Nose, throat, Sinus And Dizziness Centre Pte Ltd

The book begins with a detailed review of respiratory and laryngeal anatomy and physiology, then coves vocal health, evaluation, vocal pathology, neurologically based voice disorders, vocal rehabilitation, phonosurgery, management of head and neck cancer, vocal performance, and drug types and effects on the voice.

He has authored and co-authored over 27 publications. He is immediate past Clinical Director He has written extensively, including several books, numerous articles and chapters, and regularly lectures on voice-related topics. Rubin has served in multiple capacities on many international editorial and scientific boards and committees. As well as head and neck oncology, he has a longstanding interest in voice disorders, having established the Doncaster voice clinic in after training in Birmingham and Newcastle. He obtained his medical degree, residency training in otolaryngology, and fellowship training in Laryngology all at UCLA. He is a dedicated Laryngologist whose medical practice is devoted to the breadth of laryngology: He is a NIH funded researcher in the field of Neurolaryngology, Neuromuscular Control of the Larynx, and Mechanisms of Voice Production and has made scientific and clinical contributions in these arenas. His research interests complement his clinical specializations, namely Airway Obstruction and Hearing Loss in children. During his training he undertook a BSc in Clinical Anatomy during which he undertook clinical research in conjunction with Harvard Medical School. His practice encompasses all types of ear, nose and throat problems in children. He has special interests in the management of airway obstruction in children including laryngotracheal reconstructive surgery , and in middle ear and mastoid surgery. His practice also includes the management of routine ENT conditions in children with other complex medical problems. He is a regular faculty member on other educational courses including coblation tonsillectomy courses. Prof Hess Markus M. He is a dedicated otolaryngologist and phoniatrician speech-language pathology and medicine , subspecializing in laryngology, phonosurgery, and disorders of professional voice users. The special environment in Hamburg enables the performance of the highest level of patient care in a center of excellence. Hess brings a multidisciplinary approach to such patients as public speakers, singers, and actors. Patients receive cutting-edge minimally invasive techniques in laryngeal microsurgery as well as office-based voice surgery in topical anesthesia. He holds a double specialty in Ear, nose and throat surgery as well as Phoniatrics medical specialty of communication disorders. He is currently serving as vice-president of the Union of European Phoniatricians. He is a founding member of the European Academy of Phoniatrics and also a founding member of the Finnish Society of Laryngology. Geneid leads a multidisciplinary team dealing with voice patients in the Phoniatrics department in Helsinki, Finland. His main interests are voice rehabilitation through surgery and voice therapy. He has a growing number of over 24 publications and lectures regularly on phonosurgery- and voice-related topics. Some of these topics include glottoplasty for raising the pitch, vocal fold augmentation treatment for presbyphonia and others. Kishore Sandu Kishore B. He has more than 40 articles publshed in peer reviewed journal and 8 chapters related to compromised airway in children and adults. Prof Mahieu Amersfoort the Netherlands. He has published more than papers and chapters in books related to laryngology. He has received several rewards nationally and internationally for work in laryngology. He has organized more than 15 international phonosurgical courses. He has also conducted and co-ordinated research on Laryngeal Cancer for the EC. Founding member and first president of the International Association Phonosurgeons. When not working can usually be found aboard his small sailing boat. Research Team on the Ventilatory Handicap. His main interest is in Phonosurgery, Neurolaryngology, but also interested in Otology and Skull base surgery. He is the current President of the French Society of Phoniatry. In he finished his thesis on Adductor Spasmodic Dysphonia. He published several papers on topics related to head and neck cancer prognostication and HPV and laryngology AdSD, lasersurgery in early laryngeal carcinoma. But above all he is dedicated to his patients. When there is time left, he can be found in his motorcycle museum amongst his English and Italian classic bikes K. Solon Thanos to quantify and improve nerve regeneration. His clinical interests are: Electrophysiological and imaging techniques for the evaluation and representation of the muscles and nerves of the face and of the larynx, application of botulinum toxin in the head and neck region, functional

diagnostics and therapy of peripheral nerve lesions. Development of new methods of reconstruction of the facial and laryngeal nerve, electrostimulation as diagnostic and therapeutic tool, Central changes after brain nerve failure, in particular of the facial and vestibular nerves. He is author or co-author of more than 80 peer-reviewed publications and has been invited to more than lectures worldwide, covering all fields of laryngology. Postma received his medical degree from Hahnemann University in Philadelphia and completed his residency in Otolaryngology at the University of North Carolina at Chapel Hill in He took a fellowship in laryngology and professional voice at Vanderbilt University and joined the faculty at Wake Forest in These include voice disorders, professional and singing voice care, dysphagia and complex swallowing disorders, airway surgery and reconstruction, spasmodic dysphonia, extraesophageal and gastroesophageal reflux, and chronic cough. In addition, he is one of the pioneers in the area of in-office surgery including transnasal esophagoscopy and un-sedated laryngeal and airway laser surgery. This work has revolutionized the care of individuals with a host of voice and swallowing problems at a fraction of their previous costs. He is the author or co-author of peer-reviewed publications and has written 50 chapters and invited articles as well as edited 3 books. He has given more than presentations on a wide array of laryngologic topics. He did a lot of Laryngeal Research work at Dr. He then went back to Kyoto University to work as a lecturer, and later moved to newly established Dept. Thereafter, he became an Emeritus professor, and opened a private clinic majoring of his patients are voice disorder and congenital anomalies such as cleft lip and palate. He continued with intensive research in laryngeal framework surgery and pertinent workshops all over the world, starting at Amsterdam Free University with Prof. His work has been recognized internationally and he was given Awards and Honorary Member of Societies. He has lead many departments in the past and helped developed successful laryngology and pharyngology services. He is one of the frontiers in the development and use of transnasal oesophagoscopy in diagnosis and management of dysphagia. His previous appointment were: Tetsuji Sanuki was born in Shimane prefecture Dr Kanazawa is one of Japanese leading laryngologist especially in the field of dysphagia. His special interest is in aspiration prevention surgery and surgery in neurological dysphagia like hyoid suspension surgery. He held important position in various ENT centres in Japan in the past. He pioneered the development of Swallowing and Voice centre at the Hamamatsu City Rehabilitation Hospital 5 years ago. This is one the largest multidisciplinary rehabilitation Centre in Japan. He has authored over peer-reviewed manuscripts, holds numerous patents, has edited and authored 4 books, is the co-founder of two medical device start-up companies, and is the past President of the Dysphagia Research Society. He has created a medical device that can manually control the upper esophageal sphincter, is working on an innovative dilator for upper esophageal sphincter stenosis, is developing a comprehensive swallow propulsion system, and is evaluating the use of muscle stem cells for dysphagia rehabilitation. He has dedicated his career to improving the lives of people with profound swallowing impairments Prof Wilson Professor Janet Wilson graduated in Edinburgh She is the author of over scientific papers on topics such as voice disorders, swallowing, snoring, clinical effectiveness, medically unexplained symptoms and the development of patient reported outcome measures. Lieberman Jacob Lieberman, MA, DO, is an internationally acclaimed expert on physical and psychological management of hyper function voice disorders. As an Osteopath and a Psychotherapist he developed the Lieberman protocol for laryngeal examination and physical treatment to release muscle tension and improve joint movements. He is a member of the voice clinic at Lewisham University Hospital London. He has researched and co-authored papers on postural aspects in voice disorders and mechanical dysfunction of the larynx. He is a contributor to leading text books in voice: He is continuously researching the effects of Laryngeal manipulation on the production of voice. He has been training Ent and SLT in applying palpation as a tool for examination and treatment of laryngeal muscles in the UK, and internationally. Participants find it a useful approach in their voice work. Since that time she has built up the service and now heads a small but dedicated team and still enjoys a clinical caseload. A new role has been created at the Royal Northern College of Music where for several years Frances has been teaching the first year singers the mechanics of voice production and vocal care. His work has been recognised international and he has been honoured and awarded several prestigious titles internationally. Some of these are: He is pioneering cutting edge neurolaryngology and development of laryngeal pacing. Prof Birchall

Martin is one of the leading Academic Otolaryngologists in the world, one of the leading academic surgeons in Europe and an international figure in the field of translational regenerative medicine. His work is dedicated to the successful translation of innovative technologies, especially in the field of stem cells and regenerative medicine, with a focus on alleviating suffering and improving the quality of life for those with disorders of the head and neck, voice and swallowing. These multidisciplinary teams focus on clear therapeutic targets. Mr Sandhu is a Laryngologist with a special interest in laryngotracheal stenosis but also manages voice and swallowing disorders. He has experience in performing the full spectrum of endoscopic and open surgical procedures on the larynx, pharynx and airway. Many of these procedures he has pioneered himself. He lectures nationally and internationally on these subjects and has an active research programme. He was responsible for setting up The National Centre for Airway Reconstruction in London which comprises a multidisciplinary team of specialists with an interest in airway problems. This unit has treated the largest number of adult patients with laryngotracheal stenosis in Europe. He is also consultant for voice and speech pathology at the university center of audio phonology of Louvain at Brussels. His interest in Laser surgery led him to contribute to the development of dedicated devices as the micromanipulator and microinstruments. He initiated the new scanner and the new robotic micromanipulator for laser- assisted incision and dissection. He contributed to the development of the Co2 laser wave-guide. Dr Makin is widely respected for his expertise in gastroenterology and in particular for his endoscopic management of pancreatobiliary problems.

Chapter 2 : Melody Voice Clinic

Phonosurgery includes phonomicrosurgery (microsurgery of the vocal folds done through an endoscope), laryngoplastic phonosurgery (open-neck surgery that restructures the cartilaginous framework of the larynx and the soft tissues), laryngeal injection (injection into the larynx of medications as well as synthetic and organic biologic substances.

The melody of human voice depends on the vocal ligament an elastic structure of the vocal folds, which is not present in any other species. So there is no experimental model for human voice. Human voice acts as a primary instrument to project our personalities in the society. Voice problems may arise from laryngeal or systemic disease or trauma or misuse. The result of voice dysfunction is sometimes dewasting, endanger the life of professional voice users like singers, actors, politicians, educators etc. Many people, suffering from voice disorders live desperately in society with the opinion that no proper treatment is available for their problems. In fact invention of phonosurgical techniques has created a ray of hope for such victims of voice disorders. Voice problems may be of congenital, traumatic, inflammatory, neoplastic, neurological or functional origin. The diagnosis of voice disorders starts with detailed history from the patient and indirect laryngoscopic examination by the otolaryngologist. For a long time perceptual voice analysis by hearing the patients voice and judging its quality has been a basic tool in deciding the prognosis of the patients. Recently computerised objective voice analysis methods like voice spectrograms electroglottography, phonotograms etc are gaining importance in judging the prognosis and also for documentation. The invention of video laryngoscopy, and videolaryngostroboscopy techniques have made diagnosis more precise in the voice care. The management of voice disorders is a team work consisting of otolaryngologist, speech pathologist, Voice coach, psychiatrist, and sometimes plastic surgeons and pediatricians etc. The voice disorders may be of functional or organic eg. It also acts as an important adjuvant treatment modality before and after voice surgery or phonosurgery. Claudius Galen who was the founder of laryngology and voice science first recognised the importance of brain in controlling phonation and distinguished between speech and voice. In Manuel Garcia, famous opera singer invented indirect laryngoscopy by using a dental mirror is still a basic tool for visualising vocal folds by otolaryngologists. The term phonomicrosurgery was first introduced by Von Laden in The term phomomicrosurgery was introduced in Use of surgical microscope for endolaryngeal microsurgery was introduced by Kleinsasser in The techniques of laryngoplastic phonosurgery were first introduced by Payr in , but the real concept was created by Isshiki in Isshiki, a japanese surgeon has the credit for the concept of modern laryngeal framework surgery in the management of voice disorders. It was popularised by Koufman and Zeitels in United States since It has been practised in India since and gaining a lot of popularity as a subspeciality of otolaryngology. Phonosurgery over the Vocal folds for voice generation A. Phonomicrosurgery of mass lesions like nodules, cysts, deficits of vocal folds etc. Nerve muscle innervation techniques. Vocal Fold Injection Techniques. Phonosurgery for voice resonance. The includes correction of cleft paltate, cleftlip, orthodontic surgery pharyngoplasty and endoscopic sinonasal surgeries. For centuries the benign vocal fold lesions like cysts were managed by direct excision of the mass or cyst over the vocal fold by stripping of the vocal fold either by naked eye direct laryngoscopy or by microlaryngeal surgery. In the recent times this technique is abandoned as it was found to produce scarring of the vocal folds resulting in poor voice. In this technique the vibratory epithelium is protected during excision of the mass for preserving the voice. This surgery is done under endotracheal general anesthesia using an operating microscope. The basic procedure consists of injection of vocal fold with normal saline and microflap dissection for removing the mass over the vocal folds by preserving the vibratory epithelium. This technique is also applied for augmentation of vocal folds with fat or fascia for correction of voice for vocal cord atrophy with bowing of vocal folds which may be either congenital or developmental. This surgery has come into practice in India very recently, This has become a ray of hope for correction of voice disorders in professional voice users like singers, politicians, educators etc. Most of the phonomicrosurgery techniques are done with cold, steel instruments reserving the laser for more vascular lesions, as the laser produces heat and scarring of the vocal fold. Laryngoplastic phonosurgery This is otherwise known as thyroplasty, or laryngeal frame work surgery.

This is of 4 types. This is also known as medialisation laryngoplasty M. Unilateral vocal cord paralysis, paralytic dysphonia: Thyroplasty type I has largely replaced the teflon injection technique, which was practised for several years in the management of paralytic dysphonia. In this technique, under local anaesthesia a window is cut in the thyroid lamina in the neck on the paralysed side and the piece of thyroid cartilage is depressed inwards towards the midline until the normal cord touches the paralysed cord, thus closing the glottic gap resulting in normal voice. The thyroid cartilage in the window is held in place with a silastic block. As this surgery is done under local anaesthesia patients voice can be monitored on the operating table itself. This technique is sometimes supplemented by another technique called arytenoid rotation to close large posterior glottic gaps in vocal cord paralysis. This is the commonest type of thyroplasty in practice. In this technique the vocal folds are displaced laterally away from the midline under local anaesthesia. This technique is presently applied in the management of spastic dysphonia. In this technique the vocal cords are pushed back posteriorly thus shortening the vocal folds resulting in lowering of the pitch. This technique is commonly applied in the management of puberity Dysphonia a developmental disorder of larynx in males, refractory to voice therapy. By applying this technique the high pitched voice or feminine voice in males can be converted into low pitched or normal voice. It is indicated for raising of pitch in females who have male voice Androphonia Nerve muscle innervation techniques: Nerve muscle pedicle surgery involves implanting a portion of sternohyoid muscle with its intact motor branch from ansa hypoglossi into a paralysed posterior cricoarytenoid muscle. This is indicated in the management of bilateral vocal cord paralysis of varied aetiology. The operation has not been universally satisfactory because of its varried success rate. First Paediatric awake Vocalfold surgery in a youngest child of ten years from India -? First Time in the World. For several years injection of Teflon into the vocal folds has been practised for correction of paralytic dysphonia. Eventhough it has been largely replaced by techniques of thyroplasty and arytenoid rotation it is still indicated for preventing aspiration in children with vocal fold paralysis. Injection of fat and collagen are widely practised for correction of paralytic dysphonia as temporaty methods before proceeding to thyroplasty techniques. Introduction of phonomicrosurgery and laryngoplasitc phonosurgery techniques has revolutionised the management of voice disorders. It has created a ray of hope for victims of voice problems thus forming a new subspeciality in the field of Otolaryngology.

Chapter 3 : ELSOC | European Laryngological Society

Because human communication under-lies and drives almost every aspect of our daily lives, a great premium is placed on vocal quality and clarity of expression.

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 strobo-laryngoscopy 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 â€" 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 â€" 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 â€" 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 4 : 11th Workshop on Phonosurgery Mumbai - calendrierdelascience.com

The management of voice disorders is a team work consisting of otolaryngologist, speech pathologist, Voice coach, psychiatrist, and sometimes plastic surgeons and.

Chapter 5 : Voice Disorders

phonosurgery in short. methods to improve the voice Slideshare uses cookies to improve functionality and performance, and to provide you with relevant advertising. If you continue browsing the site, you agree to the use of cookies on this website.

Chapter 6 : Phonomicrosurgery

a vocal fold abnormality that is unlikely to respond to voice therapy or medical management a vocal fold abnormality that has not responded to a trial of voice therapy and/or medical therapy a vocal fold abnormality that is "suspicious" for cancer (atypia, early cancer) (For more information, see Laryngeal Atypia and Early Cancer.).

Chapter 7 : Association of Phono Surgeons of India

The name was changed from the original "Phonosurgeons" to 'Phonosurgery" to better represent the multidisciplinary efforts surrounding the surgical management of laryngeal and voice disorders.

Chapter 8 : Phonosurgery: Assessment and Surgical Management of Voice Disorders | JAMA | JAMA Netw

presentation on phonosurgery Slideshare uses cookies to improve functionality and performance, and to provide you with relevant advertising. If you continue browsing the site, you agree to the use of cookies on this website.

Chapter 9 : World Phonosurgery Congress

The International Journal of Phonosurgery and Laryngology (IJOPL) is the official journal of the Association of Phonosurgeons of India, a conglomeration of otolaryngologists, who are interested in laryngology and voice. International Journal of Phonosurgery and Laryngology is determined to showcase the basic and clinical research in the field.