香 港 耳 鼻 喉 科 醫 學 院

The Hong Kong College of Otorhinolaryngologists

Scientific Meeting

28 November 2009, Saturday

Pao Yue Kong Auditorium, Ground Floor
Hong Kong Academy of Medicine Jockey Club Building
99 Wong Chuk Hang Road, Aberdeen, Hong Kong

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Trainee Research Presentation 2009

Board of Adjudicators:	Dr Luk Wai Sing Dr Chan Kin Ming Dr Ng Siu Kwan Dr Wai Kin Hang Dr Yeung Kong Wah

Programme	
2:00 – 2:15pm	***A prospective study on efficacy of topical Mitomycin C as an adjuvant treatment in pinna keloids*** *Dr Fung Tai Hang, Thomas, Department of ENT, PYNEH*
2:15 – 2:30pm	***Any potential predictors of malignancy in cytologically indeterminate thyroid nodule?*** *Dr Lam Wai Hung, Eddy, Department of ENT, YCH*
2:30 – 2:45pm	***Vocal outcome measures after botulinum toxin injections for adductor spasmodic dysphonia*** *Dr Lau Wai Yip, Stephen, Department of ENT, QEH*
2:45 – 3:00pm	***Symptoms of Nasopharyngeal Carcinoma – Present and Past*** *Dr Lee Chi Chung, Department of ENT, YCH*
3:00 – 3:15pm	***A prospective study on incidence of lingual nerve injury following direct laryngoscopy*** *Dr Wong Chui Yan, Fiona, Department of ENT, PYNEH*
3:15 – 3:30pm	***Presentation by the Winner of Thomas Cheung Education Fund Scholarship2008*** *Dr Tang Chi Ho, Eric, Department of ENT, PWH*
3:30 – 3:50pm	***Tea Break***

Lecture by Professor Anil T Ahuja

Professor, Chairman, Chief of Service
Department of Diagnostic Radiology & Organ Imaging
Prince of Wales Hospital, The Chinese University of Hong Kong

Chairman:	Dr Fung Kai Bun
3:50 – 4:40pm	***Ultrasonography and the ENT Professionals***

A prospective study on efficacy of topical Mitomycin C as an adjuvant treatment in pinna keloids

Dr FUNG Tai Hang Thomas
Department of ENT, Pamela Youde Nethersole Eastern Hospital

Keloid scars are formed by over-activity of fibroblasts producing collagen and they cause significant morbidity both from their appearance and from their symptoms. Existing treatments are often unsatisfactory. Surgical excision alone has a recurrence rate ranging from 50-100% in 2 years. Topical Mitomycin C is known to inhibit fibroblast proliferation and thus it may be useful in preventing recurrence of keloids.

OBJECTIVES: To determine whether topical application of Mitomycin C to the wound bed of excised pinna keloids would prevent their recurrence.

METHODS: 28 patients and 37 pinna keloids were recruited for surgical excision. After haemostasis, topical Mitomycin C 0.4mg/ml was applied to the wound bed. Patients were followed up at regular intervals. Defaulters were phone interviewed. Wound complications, recurrences and the size of the recurrences were documented. The results were compared with 50 cases of pinna keloids that were treated by surgical excision alone in the past 8 years.

RESULTS: 4 of the 37 patients who received Mitomycin C developed recurrence (10.8%). The average follow up period was 52 weeks. Average time of detection of recurrence was 27 weeks. Surgical excision alone had a recurrence rate of 38% (19 out of 50). The odd ratio was 0.198. Using Chi square test, the 95% confidence interval was shown to be between 0.065 and 0.604 (<1). The result suggested that those who had adjuvant treatment with topical Mitomycin C would have reduced risk of recurrence.

CONCLUSIONS: The topical application of Mitomycin C to wound bed has been shown to be useful in preventing recurrence of surgically excised pinna keloids.

Any potential predictors of malignancy in cytologically indeterminate thyroid nodule?

Dr. Eddy WH Lam, Dr. TM Chan, Dr. CM Ngai, Dr. Raymond Ma
Department of ENT, Yan Chai Hospital

Background: The management of patients with cytological diagnosis of indeterminate thyroid lesion still remains problematic. The risk of malignancy with indeterminate cytology usually leads to a recommendation for partial or near total thyroidectomy. This study seeks to identify potential clinical, biochemical, cytological and sonographic factors in predicting malignancy in cytologically indeterminate thyroid nodules.

Study design and methods: A prospective multi-institutional study was conducted between July 2008 and October 2009. Consecutive patients in the Department of ENT (Yan Chai Hospital) and two surgical departments (Yan Chai Hospital and Princess Margaret Hospital) with pre-operative fine needle aspiration diagnosis of follicular lesion or follicular neoplasm were recruited. Detailed clinical history, physical examination, blood tests and ultrasound of thyroid were performed before the scheduled thyroidectomy. Univariate and multivariate analyses were carried out by SPSS version 17.0 to study the correlations between the collected parameters with the final histological diagnosis.

Results: A total of 102 patients with 110 indeterminate thyroid aspiration cytology were recruited. The incidences of malignancy in follicular lesion (N=96) and follicular neoplasm (N=14) were 15.6% and 28.6% respectively. Cytological findings of nuclear groove and atypia, and sonographic features of microcalcification and macrocalcification were shown to have statistically significant correlation with thyroid malignancy in univariate analysis. Other features not statistically associated with malignancy included gender, age, number and size of the nodules, and sonographic spectral parameters. Based on the binary logistic regression analysis, a formula predicting the risk of malignancy in individual patient, taking into account of their cytological and sonographic features, was derived.

Conclusion: The risk of malignancy in cytologically indeterminate thyroid nodule significantly increases with sonographic calcification, cytological features of nuclear groove and atypia. We should seriously consider offering operative treatment in the presence of these features.

Vocal Outcome Measures after Botulinum Toxin Injections for Adductor Spasmodic Dysphonia

Dr LAU Wai Yip Stephen
Department of ENT, Queen Elizabeth Hospital

Objectives: This study evaluates the efficacy and morbidity of botulinum toxin injections in local Chinese population with adductor spasmodic dysphonia.

Method: This is a prospective study conducted between September 2007 and September 2009 at the Queen Elizabeth Hospital. All patients with newly diagnosed adductor spasmodic dysphonia were recruited. Patients with other vocal pathologies or dysfunctions were excluded. They received transcutaneous injection of botulinum toxin A into thyroarytenoid muscle using simple needles under endoscopic guidance in an out-patient setting. Repeated injections with step up dosage every 4 week were used until a successful response was achieved. Objective and subjective outcome measures were performed before the first injections and after the last injections at 1-month, 3-month and 5-month intervals. Objective outcome measure consisted of acoustic analysis of patients' voice. Subjective outcome measure consisted of perceptual ratings of voice quality and voice related quality of life assessment using Voice Activity and Participation Profile (VAPP) questionnaire. Severity and duration of side effects were documented.

Results: A total of 12 patients were recruited. They each received between 1 to 3 injection(s) before a satisfactory response was achieved. Acoustic measure, symptoms score and VAPP score all demonstrated a statistically significant improvement to at least 3 months after the injection (paired t-test, $p<0.05$). Majority of the patients have a mild degree of side effects like breathiness and aspiration of liquids during the first 2 weeks. They were all keen to proceed with periodic injections.

Conclusion: Our results suggest that the injection of botulinum toxin is an effective treatment for relieving the symptoms, improving the voice and quality of life of local Chinese patients with adductor spasmodic dysphonia and the side effects are well tolerated.

Symptoms of Nasopharyngeal Carcinoma – Present and Past

Dr LEE Chi Chung
Department of ENT, Yan Chai Hospital

Objective: This study looks into the pattern of presentation of nasopharyngeal carcinoma so as to enable clinicians to be more aware of the disease. We also compare the findings with those from a similar study done 20 years ago to see if anything evolved with time.

Study design: retrospective case series

Method: From our hospital's pathology database, 289 new cases of nasopharyngeal carcinoma were identified within the five-year period from 2004 to 2008. Case notes were retrieved for collection of basic epidemiological factors, together with the symptoms and their duration. Tumour staging was done according to the investigation results. The results were analysed to look for any relationship between variables. Comparison with a historical control done in the Prince of Wales Hospital 20 years ago was followed.

Results: Our sample comprised of 211 male patients and 78 female patients with a mean age of 53 at the time of diagnosis. Neck mass was the most common symptom, occurring in 46% of all patients. Other common symptoms include unilateral hearing loss, tinnitus, nasal bleeding and nasal obstruction. The mean duration of presentation was 4.09 months. However, patients with nasal and aural symptoms tended to present later. Patients with different age, sex and staging presented quite similarly. Compared with the past, patients nowadays are older and have less neck mass and nasal symptoms than before. However, the duration of symptoms, a marker for the readiness of diagnosis, remains similar.

Conclusion: Nasopharyngeal carcinoma hits the population at a younger age than most other tumours. Nasal and aural symptoms are easily trivialized. Overall the disease did not present earlier than before, despite heightened public awareness. More has to be done to facilitate early diagnosis of the disease.

A prospective study on incidence of lingual nerve injury following direct laryngoscopy

Dr Fiona CY WONG, Dr TONG Fu Man, Dr CHOW Shun Kit
Department of ENT, Pamela Youde Nethersole Eastern Hospital

Background: Though uncommon, the lingual nerve is susceptible to injury from a number of causes. Trauma, infection and neoplasm could lead to sensory dysfunction, while iatrogenic causes in dentistry, particularly third molar extraction, oral and maxillofacial surgery, orotracheal intubation and the use of laryngeal mask airway account for the majority of cases. Laryngoscopic procedure resulting in lingual nerve injury is another rare but well identified cause, with its overseas incidence ranging from 3 to 17%. Most cases result in transient altered taste and sensory deficit, but there are cases leading to permanent untoward effects. A correlation between the duration of suspension, size of laryngoscope and the risk of complications has been demonstrated but evidence in literature is limited. Local data is particularly scarce. This study is therefore intended to investigate the local incidence which would help further educate and care for patients undergoing laryngoscopy.

Objective: The study was designed to determine the incidence of lingual nerve injury following direct laryngoscopy and to assess its severity, risk factors and clinical outcome.

Methodology: A prospective study was undertaken in the Department of Ear Nose and Throat in Pamela Youde Nethersole Eastern Hospital from March to September 2009 after approval from the Hong Kong East Cluster Ethics Committee. Patients admitted for laryngoscopy in our department were prospectively and consecutively studied before and after the procedure. Fifty patients were recruited.
Records on operation details were completed and the recruited patients were interviewed in the immediate postoperative period. For those with altered taste or tongue sensation after the operation, detailed taste test (i.e. sucrose, saline, citric acid, quinine) and neurosensory dysfunction test (i.e. temperature, proprioception, pain, two-point discrimination) would be performed.

Result: A total of fifty patients participated in the study, with 40 male and 10 female patients. The mean age was 62.06 (ranging from 36 to 87). Mallampati classification score was recorded, with class I in 3 patients, class II in 39 patients, and class III in 8 patients. Two out of fifty patients (one male, one female patient) suffered subjective taste disturbance with altered tongue sensation after the operation. However, there was no objective taste or neurosensory loss in the tests conducted. Their symptoms resolved spontaneously in one week. Six patients developed bruises in the oral cavity postoperatively and one patient resulted in a dislodged upper molar

during orotracheal intubation by anesthetist. There were no reported broken teeth, tongue laceration or tongue mobility problem. In addition, there were no major complications such as upper airway problems, cardiovascular events, pulmonary edema or cervical spine injuries in the study cohort.

Regarding the size of laryngoscope, anterior commissure laryngoscope was employed in 21 patients, small size laryngoscope in 9 patients, medium size laryngoscope in 6 patients and Lindholm laryngoscope in 14 patients; in which, Lindholm laryngoscope was used in both patients with subjective taste loss.

All cases required suspension device for detailed examination and the mean suspension time was 24.4 minutes (ranging from 5 to 200 minutes). The operative diagnoses included carcinoma of larynx, hypopharyngeal carcinoma, vocal cord nodule and cyst, vocal cord leukoplakia, vocal process granuloma, Reinke's edema and epiglottic cyst. The commonly performed procedures were microlaryngoscopy with biopsy, with laser excision in 4 cases and panendoscopy in 6 cases. Twenty-two cases were performed by specialists and the remaining twenty-eight cases were performed by trainees. None of the aforementioned parameters (i.e. patient's age, surgeon, suspension time, pathology and operative procedure) were statistically significant as it relates to the risk of lingual nerve injury.

Discussion: Suspension of laryngoscope is indispensible in microlaryngoscopy, as it allows bimanual surgery in a stable operating platform. The recent upsurge in phonomicrosurgery has posed the use of larger laryngoscopy for a lengthened operative time. This study reviewed 50 patients undergoing suspension laryngoscopy and investigated the incidence of lingual nerve injury. The presumptive causes of these nerve injuries include direct pressure on the nerve by laryngoscope, compression between the medial and lateral pterygoid muscles during manipulation of mandible, or stretch injury associated with suspension laryngoscopy and cricoid cartilage counter-pressure; and it mostly results in neuropraxia. In our cohort series, it demonstrates comparable result in the incidence of lingual nerve injury with that in literature. The higher incidence in using large-sized laryngoscope implies the importance of careful placement of the correct sized laryngoscope. The gender difference reflects the smaller female oral cavity and pharynx is more susceptible to injury. As symptoms are usually transient and self-limiting, as consistent with the expected course of neuropraxic injury, treatments like corticosteroid therapy, nerve repair or behavioural strategies are often unnecessary. Further prospective large-scale case-controlled study could be undertaken to elucidate the associated risk factors and help prevent complications in combating the evolving sophistication of phonomicrosurgery.