



65th Annual Meeting
Victoria Conference Centre (VCC), VICTORIA, BC

Scientific Program with Abstracts

MONDAY, MAY 23, 2011
LECTURE THEATRE, VCC

PLENARY SESSION

- 08:00-08:05 **Introduction of Guest Speaker Dr. Joseph Roberson, Palo Alto, CA** – F. Kozak, Vancouver, BC
- 08:05-08:45 **Atresia-Microtia: Challenges and New Options** – J. Roberson, Palo Alto, CA
- 08:45-08:50 **Introduction of Guest Speaker Dr. James Smith, Portland, OR** – D. Brown, Toronto, ON
- 08:50-09:30 **The Growing Globalization of Medical Education: How Can We Make A Difference?** – J. Smith, Portland, OR
- 09:30-09:40 **TOP PAPER PEDIATRIC OTOLARYNGOLOGY**
Pediatric Nocturnal Enuresis in Obstructive Sleep Apnea - Does This Aid in Management Decisions? – T. Penney, T. Uwiera, A. Bascom, P. Metcalfe, M. Witmans, Edmonton, AB

Learning Objectives

By the end of this session, the otolaryngologist will be able to:

- 1) describe the key presenting symptoms and signs in children presenting for evaluation of obstructive sleep apnea.
- 2) interpret the significance of positive questionnaires in the diagnosis of pediatric obstructive sleep apnea.
- 3) evaluate the utility of questionnaires to assist in diagnosis of severe pediatric obstructive sleep apnea.

Abstract

Objectives - Pediatric obstructive sleep apnea (OSA) is a common problem with up to 50% also suffering nocturnal enuresis (NE). This study investigates the OSA-NE relationship and examines the effects of OSA treatment on NE to help direct future OSA treatment decisions.

Methods - After appropriate ethics approval, patients aged 5-17 were recruited upon presentation to otolaryngology complaining of sleep-disordered breathing. Patients completed OSA-18, PSQ-22 and DVISS questionnaires. Patients with suspected OSA were given a course of intranasal steroids (INS) and asked to return in 3 months to repeat questionnaires, to be reassessed and to undergo overnight pulse-oximetry.

Results - 74% of patients with symptoms of OSA have NE. The mean OSA-18 score was 69.3 (moderate range) and 95% had positive PSQ-22 scores. All patients with severe OSA-18 scores had positive DVISS scores resistant to 3 months of INS. Patients with positive PSQ-22 scores had positive DVISS scores both before (76%) and after (67%) INS. Children with small or moderate OSA-18 scores had marked resolution of NE symptoms following treatment (50% to 25% and 75% to 0%, respectively).

Conclusions - NE is high in patients presenting with symptoms of OSA. Response of NE to INS may aid in diagnosis of severe OSA.

- 09:40-09:50 **TOP PAPER EDUCATION**
Creating a Surgical Phantom: The Larynx – G. Tsang, J. Franklin, G. Campbell, London, ON

Learning Objectives

- 1) Appreciate the need for various modalities of surgical simulation in medical training
- 2) Gain insight into how a high-fidelity, tissue-mimicking simulator can be produced

Abstract

Objectives: To create a high-fidelity surgical simulator of the larynx for Microlaryngoscopy training.

Methods: A three-dimensional model of the larynx was reconstructed using images from the Visible Human Male. Injection molds were subsequently created for individual components of the laryngeal skeleton and other soft tissue structures with a focus on the gross anatomy of the glottis. Poly(vinyl) alcohol-cryogel (PVA-C), a material whose physical properties can be modified via freeze-thaw cycling, was used to create each individual component of the larynx. The physical properties of the true vocal folds were evaluated with various preparations of PVA-C. The likeness of the formulations to the clinical scenarios was determined by expert opinion utilizing a paired comparison paradigm.

Results: A high-fidelity male larynx that accurately mimics tissue properties was created. The simulator is modular allowing for removable interchangeable components including various pathologies

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Conclusions: Medical education is increasingly looking towards simulation to provide an ideal learning and practice environment without compromising patient safety and costs. A relatively inexpensive bench model of the larynx was created in order to facilitate this need in the area of microlaryngoscopy.

09:50-10:00

TOP PAPER HEAD AND NECK SURGERY

Primary Surgery versus Chemoradiotherapy for Advanced Oropharyngeal Cancers: A Multi-institutional Analysis of Survival – D. O'Connell, V. Biron, P. Dziegielewski, Edmonton, AB, W. Matthews, . Dort, Calgary, AB, H. Seikaly, D. Williams, Edmonton, AB

Learning Objective

At the end of this presentation general otolaryngologists, head and neck oncologists, residents, fellows and allied health professionals will have a better understanding of the survival outcomes of large cohort of patients treated with surgical and non surgical modalities for advanced stage oropharyngeal cancer. The information presented here will enable the audience to better counsel their patients regarding survival outcomes in this disease setting, and improve the evidence based approach to counselling patients on treatment options.

Abstract

Background: The optimal management of advanced (stage 3 and 4) oropharyngeal squamous cell carcinoma (OPSCC) remains controversial. Surgery (S), radiotherapy (RT) and chemotherapy (CT) alone or in varying combinations make up the mainstay of OPSCC treatment. Currently no consensus exists regarding which treatment modalities offer patients with OPSCC the best survival outcome. This study provides an overview of diagnosis, treatment and survival outcome of all advanced stage OPSCC diagnosed in a territorial region over a 10 year period.

Method: All patients diagnosed with advanced stage OPSCC within Alberta, Canada between Jan.1, 1998 and Dec. 31, 2008 were included in the data analysis. 665 patients were stratified based on intent-to-treat treatment protocols. Disease specific and overall survival were used to analyze outcomes.

Results: In advanced stage OPSCC treatment with S-CT/RT was associated with the highest 5 year disease specific survival (77%) compared to 65%, 63%, 35% and 32% for CT-RT, S-RT, RT and S respectively.

Conclusion: Disease specific survival rates are significantly increased in combined modality treatment protocols (S-CT/RT, CT-RT, S-RT) compared to S or RT alone in advanced OPSCC. In this non-randomized series S-CT/RT is associated with a 12 - 14% 5 year disease-specific survival benefit compared to CT-RT or S-RT.

10:00-10:15

Special Humanitarian Outreach Presentation: Thailand – J. Rutka, Toronto, ON

10:15-10:30

Special Humanitarian Outreach Presentation: Around the World – J. Roberson, Palo Alto, CA

10:30-11:00

COFFEE: Visit to Exhibits & Posters (*Carson Hall*)

11:00-12:15

WORKSHOP #13

Interesting but Common Vertigo Cases for the General Otolaryngologist: A Panel Discussion with Special Guest Dr. Lars Odkvist, Lindkoping, Sweden – L. Parnes, London, ON,

Learning Objectives

1. At the end of this workshop, participants will have a better grasp of common vertigo problems that present to the general otolaryngologist.

Abstract

This workshop/panel will be geared to the general otolaryngologist and review common but interesting vertigo cases. Experts in the field of dizziness will discuss the various aspects of each case and provide opinions regarding etiology and management.

12:15-13:30

LUNCH: Visit to Exhibits & Posters (*Carson Hall*)

**POLYQUIN RESIDENTS COMPETITION
CHAIR: Dr. Emad Massoud, Halifax, NS**

13:30-15:00

RESIDENT PAPERS PRESENTATIONS (*available shortly*)

15:00-15:30

COFFEE: Visit to Exhibits & Posters (*Carson Hall*)

15:30-17:00

RESIDENT PAPERS PRESENTATIONS (*available shortly*)

**MONDAY, MAY 23, 2011
SAANICH ROOM, VCC**

08:00-10:30 **PLENARY SESSION** (*Lecture Theatre*)

10:30-11:00 **COFFEE: VISIT TO EXHIBITS & POSTERS**

11:00-12:15 **WORKSHOP #14**

Obstructive Sleep Apnea - Perioperative Management Strategies – B. Rotenberg, J. Chau, V. Forest, London, ON

Learning Objectives

- 1) After attending the workshop, participants will be able to describe current thinking on the management of sleep apnea
- 2) After attending the workshop, participants will understand options available to manage sleep apnea both in the community and in academic settings
- 3) After attending the workshop, participants will understand the peri-operative management of sleep apnea patients, including patient selection, pain control, level of monitoring and issues surrounding complications of surgery.

Abstract

Objective: The purpose of our workshop is to review the peri-operative management of obstructive sleep apnea

Methods: A panel of 3 Otolaryngologists (Chau, Forest, Rotenberg) will review and update the audience on current perspectives on perioperative management of obstructive sleep apnea. Major topics will be 1) pre-operative patient selection, 2) post-operative complications and management, 3) a discussion on level of post-operative monitoring, 4) post-operative pain management. A full Q&A session will ensue.

Results: Not applicable

Conclusions: Not applicable

12:15-13:30 **LUNCH: Visit to Exhibits & Posters**

13:30-17:00 **POLIQUIN RESIDENTS COMPETITION** (*Lecture Theatre*)

**MONDAY, MAY 23, 2011
OAK BAY ROOM, VCC**

08:00-10:30 **PLENARY SESSION** (*Lecture Theatre*)

10:30-11:00 **COFFEE: Visit to the Exhibits & Posters**

PAPERS: Endocrine

CHAIR: TBA

11:00-11:07 **Management of Goiter and Small Nodule Disease by Canadian Otolaryngologists** – N. Parks, S.M. Taylor, J. Trities, R. Hart, Halifax, NS

Learning Objectives

- To summarize management practices among Canadian otolaryngologists for patients with goiter and small nodule disease.
- To identify inconsistent practices relating to diagnostic workup, surgical management and follow-up.
- Review guidelines for the management of goiter and small nodule disease.
- To identify a need for Canadian consensus guidelines.

Abstract

Objectives: We describe management practices among Canadian otolaryngologists for patients with goiter and small nodule disease with identification of inconsistencies.

Methods: An online survey was emailed to all active Canadian Society of Otolaryngology members. Responses were anonymous. Information was gathered on practice demographics and individual practices pertaining to diagnostic workup, surgical management, and follow-up of patients with goiter and small nodule disease.

Results: There were 115 surveys returned from 431 active members (27% response). The majority of respondents were <40 years (55%), resided in Ontario or Quebec (62%), and described their practice as academic (65%). Management of goiter was not uniform. For example, treatment of symptomatic goiter included discharge from practice (7%), follow-up with serial ultrasound (14%), hemithyroidectomy (16%) and total thyroidectomy (63%). Management of small nodule disease following FNA cytology was inconsistent. Level VI neck dissection was routinely performed in 13% of

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cases following abnormal FNA cytology and 39% of cases following a result suggestive of papillary thyroid cancer. Practice demographics (practice location, patient population) had a significant effect on treatment following FNA cytology and intraoperative techniques such as use of an EMG nerve monitor.

Conclusion: Canadian guidelines for treatment of goiter and small nodule disease are required for uniform management.

11:07-11:14 **Validation of a Quality of Life Scale for Benign Thyroid Disease** – J. Hernandez-Lee, D. Anderson, S. D. MacNeil, Vancouver, BC

Learning Objectives

By the end of this session conference attendees will

- be able to appreciate the need for a validated quality of life instrument for benign thyroid disease.
- understand how to validate a disease specific quality of life questionnaire.
- appreciate the utility of the 2011 Quality of Life Scale for Benign Thyroid Disease 2011.

Abstract

Background: Benign thyroid disorders are common and have three management options, observation, medical therapy and surgery. Determinants of health related quality of life for patients undergoing surgery for benign thyroid disease are largely unknown. A comprehensive disease specific quality of life instrument for benign thyroid disorders is also lacking.

Objective: To determine the validity of the "Quality of Life Scale for Benign Thyroid Disease" QoLBTD" for use in patients with benign thyroid disease pre and postoperatively.

Methods: Fifty patients presenting to a tertiary care academic otolaryngology practice consented for surgery for benign thyroid disease were included. All patients were administered the disease specific QoLBTD and a global quality of life instrument, the SF. The retest for both quality of life instruments was two weeks later.

Results: Physical well-being on the QoLBTD questionnaire correlated with bodily pain and general health on the SF. Psychological well-being on the QoLBTD correlated with Mental Health on the SF. The QoLBTD was shown to be reproducible. Internal consistency for the QoLBTD was excellent.

Conclusion: The QoLBTD was shown to be a valid measurement of the quality of life of patients with benign thyroid disease. The scale is currently being used in a longitudinal study to evaluate the quality of life of patients with benign thyroidectomy and postthyroidectomy.

11:14-11:21 **Vitamin D Insufficiency and the Risk of Hypoparathyroid Following Total Thyroidectomy** – C. Nhan, R. Payne, Y. Dolev, T. Mijovic, R. Ramirez, M.A. Sanfacon, Montreal, QC

Learning Objectives

By the end of this session the audience will consider the possibility that vitamin D insufficiency may cause secondary parathyroid hypertrophy, making vitamin D insufficiency a protective factor against post-thyroidectomy hypoparathyroidism.

The audience will also be encouraged to consider alternate mechanisms or factors explaining why we may find that vitamin D insufficiency is protective against hypoparathyroidism following thyroidectomy.

Abstract

Objective: To determine whether patients with vitamin D deficiency (VDD) are at an increased risk of hypocalcemia following total thyroidectomy.

Methods: A retrospective study of 148 consecutive patients undergoing thyroidectomy at a McGill University teaching hospital. Patients who had subtotal thyroidectomy, concomitant parathyroidectomy, or whose pre and post-operative laboratory tests were incomplete for analysis were excluded. The remaining 110 patients had preoperative 25-hydroxyvitamin D (25OHD) measured. Postoperatively, PTH and corrected calcium levels were measured to assess for hypocalcemia.

Results: The rate of post-thyroidectomy hypocalcemia in VDD patients was 0% (0/10), while that of vitamin D sufficient (VDS) patients was 16% (16/100) ($P=0.17$).

Conclusions: In this series, patients with preoperative VDD did not have an increased risk of post-thyroidectomy hypocalcemia. Conversely, the trend suggests that patients with VDD are at decreased risk for post-thyroidectomy hypocalcemia. A larger, prospective study is needed to better understand the relationship between preoperative vitamin D levels and postoperative hypocalcemia.

11:21-11:34 DISCUSSION

11:34-11:41 **Patterns of Initial Management of Thyroid Cancer in Ontario 2000-2008** – S.F. Hall, J. Irish, M. Whitehead, P. Groome, Kingston, ON

Learning Objectives

By the end of this presentation the attendee will:

1. understand that there are both similarities and wide variations in the initial treatments and treatment sequences in patients with thyroid cancer in Ontario.
2. discover that some of the variation is accounted for by differences in approach between surgical specialties and between the geographic regions in Ontario.

Abstract

Purpose: To describe and compare the patients, the initial treatments and the treatment sequences over the first year for all patients with thyroid cancer across Ontario

Method: A dataset was created at ICES/Queens based on all 14000 patients with diagnosis of thyroid cancer between Jan 1 2000 and Dec 31 2008 identified by the Ontario Cancer Registry. We used demographic data from the Ontario Cancer Registry; billing data from OHIP; procedure, hospitalization and radioactive iodine data from CIHI and radiotherapy data from the Ontario Cancer Registry to construct the dataset. The rates of initial surgery (hemithyroidectomy, subtotal thyroidectomy and total thyroidectomy) with their common treatment sequences (subsequent surgery, radioactive iodine and radiotherapy) are compared by histology type (differentiated, medullary, other), surgeon (otolaryngology, general surgery), geographic region (Cancer Care Ontario treatment center regions) and hospital type (teaching vs non-teaching).

Results and Conclusions: There is a wide variation treatments and treatment sequence by histology type, within some histology types, by specialty of treating physician(s), by hospital type and by geographic region. Highlights and specific examples of agreement and non-agreement will be presented to stimulate discussion.

11:41-11:48 **Malignancy in Solitary Thyroid Nodules** – S. Ahsan, S. Keh, T. Palmer, Halifax, NS

Learning Objectives

Thyroid solitary nodule should be investigated thoroughly with a high index of suspicion as there is 15 – 20% probability of malignancy. The incidence of malignancy in our case series is higher than other published series.

Abstract

Objectives: The aim of the study was to investigate the prevalence of solitary thyroid nodules in our patients who underwent thyroid surgery and clinical significance of solitary thyroid nodules. we also compare the rate of malignancy in our case series of solitary thyroid nodules with other centres.

Methods: A retrospective review of case notes from Jan 2003 – Dec 2009 of patients who underwent thyroid surgery was performed. Patients with only solitary thyroid nodules on sonographic finding were included. Sonographic features, cytology and histology data were reviewed. Pearson's correlation analysis was used to correlate the size of nodule and presence of microcalcification with malignancy.

Result: 225 patients underwent thyroid surgery. The prevalence of solitary thyroid nodule was 27.1% . 75.4% of these patients have neoplastic pathology and the rate of malignancy in patients with solitary nodules is 34.4%. There is no correlation between the size of nodules or presence of microcalcification seen on ultrasound and malignancy ($p = 0.31$, $r = -0.13$ and $p = 0.33$, $r = 0.13$ respectively).

Conclusion: Thyroid solitary nodule should be investigated thoroughly as there is 15 – 20% probability of malignancy. The incidence of malignancy in our case series is higher than other published series.

11:48-11:55 **The Impact of Extrathyroidal Extension on Lymph Node Metastasis in Well Differentiated Thyroid Cancer** – C. Benay, V.I. Forest, M. Tamilia, L. Rochon, A. Mlynarek, M. Hier, R. Payne, Montreal, QC

Learning Objectives

1. By the end of this presentation, the audience will be able to appreciate the effect of extrathyroidal extension on lymph node metastases incidence in WDTC.
2. By the end of this presentation, the audience will be able to contrast the association of lymph node metastases in PMC to WDTC in the presence of extrathyroidal extension.

Abstract

To further characterize the biology of WDTC with aggressive behaviour, we conducted a retrospective medical record review in a tertiary care academic hospital to evaluate the association between extrathyroidal extension (ETE) and lymph node metastases and to compare the incidence of lymph node metastases in PMC to WDTC when ETE is present. Among 546 patients having undergone a thyroidectomy, 346 met the selection criteria. 126(36.4%) had PMC, and 63.6%(n=220) had WDTC. 60 tumors (17.3%) displayed ETE, and 22% of patients (n=76) had level VI lymph node metastases. Of the 60 tumors with ETE, 65% of patients (n=39) had lymph node metastases in comparison to 12.9%(n=37) for patients with tumors without ETE ($p<0.0001^*$). Of the 55 WDTC with ETE, 69%(n=38) had lymph node metastases compared to 20%(n=1) in PMC with ETE (n=5)($p<0.028^*$). These results show a positive association between ETE and lymph node metastases, and that WDTC tend to have a higher rate of lymph node metastases than PMC. This may be clinically significant since both ETE and positive lymph nodes have been associated with increased regional recurrence and mortality rates. As a result, this study indicates that when ETE is identified during surgery, a central compartment lymph node dissection is likely to yield positive lymph nodes.

Monday, May 23, 2011 – OAK BAY ROOM *continued...*

11:55-12:02 **Is Vitamin D Insufficiency a Risk Factor for Thyroid Malignancy?** - M. Roskies, R. Payne, Y. Dolev, A. Mlynarek, A. Majdan, Montreal, QC

Learning Objectives

By the end of this session the healthcare professional in the field of otolaryngology should be able:

1. To list the limited number of established risk factors for thyroid malignancy
2. To recognize that the increasing incidence of thyroid cancer is not just a result of greater detection
3. To understand vitamin D's mechanisms of action in the prevention of neoplastic disease
4. To consider the impact vitamin D status has on thyroid cancer etiology and treatment when presented with recent data from a retrospective cohort study.

Abstract

Objective: Vitamin D insufficiency has been linked with the development of several different malignancies in the past few years. The objective of this study is to determine whether vitamin D insufficiency is a risk factor for thyroid cancer.

Methods: This retrospective study involved 512 patients undergoing thyroidectomy in 2009-2010, of this, 102 met the inclusion criteria. Pre-operative vitamin D3 levels and final pathology were recorded. Vitamin D insufficiency was defined as serum levels < 75 nmol/L (30ng/mL).

Results: 56% of patients undergoing thyroidectomy were found to be Vitamin D insufficient. Of this group, 65% (37/57) had thyroid cancer. The patients with adequate Vitamin D status had a malignancy rate of 56% (25/45). The difference between the groups corresponds to an increased OR of 1.48 (p = 0.3). The overall mean 25(OH)D3 serum level in the malignant group was 13.6 nmol/L lower than in the benign group (p = 0.01).

Conclusions: Vitamin D insufficiency may correspond to an increased risk for thyroid cancer. In this study, individuals with insufficient vitamin D status had a 48% greater chance of their thyroid neoplasm being malignant.

12:02-12:09 **Sialendoscopy for the Management of Obstructive Salivary Gland Disease: A Systematic Review and Meta-analysis** – J. Strychowsky, D. Sommer, N. Cohen, M. Gupta, O. Nahlieli, Hamilton, ON

Learning Objectives

By the end of this session, the attendee will be able to evaluate the efficacy and safety of sialendoscopy for the management of obstructive salivary gland disease in adults when presented with evidence from the literature.

By the end of this session, the attendee will have an understanding of the indications for the use of interventional sialendoscopy in the management of obstructive salivary gland disease in adults.

Abstract

Objective: To conduct a systematic review with meta-analysis to determine the efficacy and safety of sialendoscopy in the treatment of obstructive diseases of the salivary glands in adults.

Methods: The literature was searched using Medline, EMBASE, and the Cochrane Library (no lower limit to October 2010) to identify studies of adult patients treated with interventional sialendoscopy for the management of salivary gland obstruction. Outcome measures included rates of success, residual obstruction, sialadenectomy, and complications. Surgical technique was also reviewed. Two independent review authors screened eligible studies, reviewed reference lists, and extracted relevant data. A statistician performed the relevant statistical analysis.

Results: Thirty seven studies met inclusion criteria. The weighted pooled proportion of success rates for twenty studies involving 1213 patients undergoing sialendoscopy with or without supportive devices was 0.86 (95% CI, 0.83-0.89) and for eleven studies involving 374 patients undergoing sialendoscopy with the combined-surgical approach was 0.93 (95% CI, 0.89-0.96). Outcomes following interventional sialendoscopy for radioiodine-induced sialadenitis was reported in three studies and success rates were variable. Rates of sialadenectomy were low and no major complications were reported.

Conclusion: Sialendoscopy appears to be efficacious and safe for the treatment of major salivary gland diseases.

12:09-12:15 DISCUSSION

12:15-13:30 **LUNCH: Visit to Exhibits & Posters**

13:30-17:00 **POLIQUIN RESIDENTS COMPETITION** (*Lecture Theatre*)