Laryngology
SOCIETY OF AUSTRALASIA
In association with the
IAP International Association of Phonosurgery

Final Program

Laryngology Sydney 2023

10 - 12 November
Luna Park | Sydney NSW

Laryngology: What Now, What Next?

lsanz.org.au

Welcome

On behalf of the Laryngology Society of Australasia (LSA), we would like to extend a very warm welcome to Sydney, Australia, where we meet on Cammeraygal land for our 2023 biennial conference.

The LSA Conference is always a highly anticipated event; a renowned platform for delivering expert content across all areas of laryngology to speech pathologists, ENT specialists, laryngologists and all those specialising in care of the larynx. The conference has continued to grow and attract national and international attention and we have no doubt that "Laryngology Sydney 2023" will be no exception.

Our organising committee has put together a stimulating and diverse program under the theme, "Laryngology: What Now, What Next?", to motivate rich discussion and inspire us all in our research and clinical practice. This year, we have the added pleasure of welcoming many international guests as we partner with the International Association of Phonosurgery to deliver a world-class scientific program. We also welcome our keynote speakers from around the globe, who will share with us the latest research and clinical advances. Our program consists of pre-conference workshops, breakfast sessions, panels, and local and international sessions. Furthermore, we also have plenty of opportunity to celebrate and catch up with colleagues at the Welcome Reception and Conference Dinner.

We would like to sincerely thank our industry sponsors for 2023, for without them, the conference would not be possible. In particular we'd like to thank our Silver Sponsors; CR Kennedy - Xion and Pentax Medical ANZ and our Bronze Sponsors; Ambu Australia, Avant, KARL STORZ Endoscopy Australia Pty Ltd and LifeHealthCare. We encourage you to visit our industry colleagues in the exhibition during breaks and breakfast sessions.

Thank you again for making the effort to join us. We hope you enjoy your time in this beautiful part of Sydney.

Danielle Stone and Daniel Novakovic
Co-Convenors, Laryngology Sydney 2023

Keynote Speakers

Maria Dietrich
Germany

Dr Maria Dietrich is a Research Associate in the Department of Psychiatry and Psychotherapy at University Hospital Bonn in Germany. She directs the Vocal Control and Vocal Well-Being Lab (VoCoWell Lab) and the specialty outpatient clinic for functional voice disorders in the same department. She is also an Adjunct Associate Professor of Speech, Language and Hearing Sciences at the University of Missouri.

Nupur Kapoor Nerurkar
India

Dr Nupur Kapoor Nerurkar is an ENT surgeon, who graduated in 1994 from KEM Hospital with a first rank in the Bombay University. Since 2004, she is practicing exclusively as a Laryngologist and is currently heading the Bombay Hospital Voice and Swallowing Center.

Emily Plowman
United States

Dr Emily Plowman is Professor, Departments of Speech, Language, and Hearing Sciences, Neurology, and Surgery; University of Florida and Adjunct Professor, Department of Medicine, Katholieke Universiteit Leuven, Belgium.

Taner Yilmaz
Turkey

Taner Yilmaz, MD, Professor of Department of Otolaryngology-Head and Neck Surgery at Hacettepe University Faculty of Medicine in Ankara, Turkey. He is a laryngologist and phonosurgeon performing exclusively laryngeal and phonosurgical procedures. Prof Yilmaz is a renowned international expert in endoscopic reconstruction of the laryngeal airway.

To view all the speaker biographies, please download the Conference App (see page 11 for download instructions).

Organising Committee

Convenors:

Daniel Novakovic | *LSA President*

Danielle Stone | *LSA Treasurer*

Organising Committee:

Thomas Stewart

Cate Madill

Trudy Lynch

Georgina Harris

Laura Moroney

Kate Baumwol

Debra Phyland

Laryngology Society of Australasia

The Laryngology Society of Australasia (LSA) was formed in 2012 to support and promote laryngology in Australasia for Otolaryngologists, Speech Pathologists and Voice Scientists.

Membership of the LSA is open to professionals working in the field of laryngology and related fields who have an active interest in the work and aims of the society.

The priority for our members is to hold meetings at which those interested in Laryngology can discuss clinical practice and present research papers.

The LSA promotes a range of multi-disciplinary research to advance the development of medical technologies and clinical pathways within Australia and Aotearoa New Zealand. As a membership group, we are passionate about pushing the boundaries in collaboration and education with similar organisations internationally, especially through Asia and the Pacific region.

The society intends to hold a major meeting at least every 2 years, with the option to hold annual meetings or smaller meetings in conjunction with other groups as decided by the Committee.

For more information, visit the LSA website:
www.lsanz.org.au

International Association of Phonosurgery

The International Association of Phonosurgery was founded in 1990 with its first meeting in Belgrade, Yugoslavia. The name was later changed from the original "Phonosurgeons" to 'Phonosurgery" to better represent the multidisciplinary efforts surrounding the surgical management of laryngeal and voice disorders.

The IAP formally meets biennially, either with an international society, or as part of a formal local Laryngology and voice meeting, as is the case this year.

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International Association of Phonosurgery Invited Speakers

Jennifer Anderson
Canada

Dr Jennifer Anderson is a Laryngologist at the Voice Disorders Clinic at St Michael Hospital, and an Associate Professor at the University of Toronto, Department of Otolaryngology-HNS and is also cross appointed in the Faculty of Music. As part of her formal education, Dr Anderson completed Masters of Science in speech language pathology (voice science) after a skull base fellowship and residency in Otolaryngology at the University of Toronto. Dr Anderson also is chair holder of the Nicole Muzzo Voice Disorders Research Chair in voice research.

Dr Anderson leads a multidisciplinary team with speech pathologists and vocal pedagogy in the diagnosis and treat a broad range of voice disorders. Dr Anderson has also trained more than 15 laryngology fellows from all over the world in the field of laryngology. Research interests include in office procedures, process redesign, gender affirmation voice treatment, laryngeal framework surgery and airway stenosis.

Michael Benninger
United States

Dr Michael S. Benninger is Professor of Otolaryngology in the Department of Otolaryngology-Head and Neck Surgery at The Cleveland Clinic Lerner College of Medicine of Case Western Reserve University.

He is the President of the International Association of Phonosurgery, the immediate past-President of the Triological Society, Vice-President of the Voice Foundation, and member of the Board of Governors of the American College of Surgeons. He is also a past-President of the American Laryngologic Association, American Rhinologic Society, the Michigan Oto-Laryngological Society and the Northeast Ohio ENT Society, and Past Treasurer of the American Broncho-Esophagological Association. He served on the Board of Directors of the American Academy of Otolaryngology-Head and Neck Surgery for 12 years, having been a both a former Vice-President and Chair of the Board of Governors of that organization. He is the former Editor-in-Chief of the Journal, Otolaryngology-Head and Neck Surgery. He has served on the Residency Review Committee for Otolaryngology and as a member of the Medical Advisory Board for WebMD.

He is the past-Chairman of the Steering Committee for the Sinus and Allergy Health Partnership.

Dr Benninger has authored or edited 12 books and has 1 additional book in press. He has also written over 110 book chapters and over 220 scientific articles, focusing primarily on voice care and laryngology, nasal and sinus disease and health care management.

A graduate of Harvard University, Dr Benninger received his medical degree from Case Western Reserve University in Cleveland, Ohio, and completed his residency at the Cleveland Clinic Foundation.

Charanjit Bahniwal
United States

Dr. Charanjit Bahniwal is an anesthesiology specialist in Cleveland, Ohio and is affiliated with Cleveland Clinic. He received his medical degree from Government Medical College Patiala in 1980 and has been in practice for over 42 years.

He has extensive experience and a keen interest in difficult airway management, working alongside laryngologists. He has been a regular presenter at the International Association of Phonosurgery conferences.

Lynn Biserøed
Norway

Lynn E. Biserøed, MD, is a consultant laryngologist and Head & Neck Surgeon Stavanger University Hospital in Norway, a board member of the Norwegian Society of Laryngology and a member of the International Association of Phonsurgery.

She graduated in Medicine from the University of Bergen in 1996 and completed her training in ENT at Haukeland University Hospital and Stavanger University Hospital and obtained her ENT specialisation January 2007.

Last year, Dr Biserøed convened the Norwegian Laryngology Conference and also presented at the IAP conference in Japan and is delighted to come to the combined LSA/IAP meeting in Sydney this year. Of specific relevance to this meeting are her great expertise, interest and experience working with adults and children with voice problems including elite and professional voice, airway stenosis, Zenkers diverticula, cough and throat irritation and exercise-induced laryngeal obstruction.

International Association of Phonosurgery Invited Speakers (cont'd)

Guillermo Campos
Columbia

Dr Campos is the founder and director of the Laryngology Institute, member of the Otorhinolaryngology Department at the Fundación Santa Fe University Hospital and Laryngology Professor at the Universidad del Rosario Medical School in Bogotá, Colombia. His practice is entirely devoted to Laryngology, Phonosurgery and Surgery of the Airway.

He is internationally known for his detailed laryngoscopic examination techniques in the office setting to improve diagnostic precision in cases of dysphonia associated to structural changes of the vocal folds.

He is permanently working on the refinement of microsurgical and laser procedures for the treatment of voice problems and laryngotracheal stenosis.

Frederik Dikkers
the Netherlands

Frederik G Dikkers MD, PhD, born in 1957, ceased patient care since 2023.

2017-2023: Professor of Otorhinolaryngology and Head of the Department AMC, Amsterdam University Medical Centers, the Netherlands. Director of the training program for specialists.

1984-2017: Resident, ultimately Associated Professor of Laryngology at the University Medical Center Groningen, the Netherlands.

Clinical interests: full range of laryngeal and tracheal problems in children and adults, with special emphasis on recurrent respiratory papillomatosis.

2008-2023: member of the Presidential Council of the European Laryngological Society.

Author or coauthor of >135 international peer reviewed articles, 56 chapters in textbooks. Patent on child-resistant button batteries. Dedicated teacher.

Ramon Franco
United States

Ramon Franco Jr, MD is a Board-Certified Otolaryngologist based at Harvard - Mass Eye & Ear and Massachusetts General Hospital in Boston the past 23 years. Over his career he has helped to move procedures from the operating room to the clinic setting where they can decrease morbidity. He helped pioneer the use of angiolytic lasers for the treatment of leukoplakia and papillomatosis, ALA photodynamic therapy for recurrent leukoplakia, photochemical tissue bonding to approximate tissue without sutures and created the SILSI technique that shifted the treatment paradigm away from surgery to allow outpatient treatment of airway stenosis with steroid injections.

Kumud Kumar Handa
India

Dr Handa is Chairman Department of ENT & Head Neck Surgery Medanta Medicity Gurgaon and was a past-President of the Indian Academy of Otorhinolaryngology & Head Neck Surgery and past-President and founder secretary of the Association of Phonosurgeons of India.

He has previously been an International faculty/guest lecturer for voice, laryngology and faculty member of All India Institute of Medical Sciences New Delhi from 1996-2009, Organising Chairman World Phonocon Feb 2017 and is a current Board member of the International Association of phonosurgeons.

Dr Handa has published more than 100 international and national publications and textbooks of laryngology & Voice.

Anastasios Hantzakos
United Arab Emirates

Dr. Hantzakos is a Consultant Otolaryngologist – Head & Neck Surgeon and director of the Voice Clinic at Cleveland Clinic Abu Dhabi (CCAD). He is Clinical Associate Professor of Surgery at the Cleveland Clinic Lerner College of Medicine of Case Western Reserve University, Cleveland, USA.

He received his Medical Degree in 1991 from the National & Kapodistrian University of Athens (NKUA). He completed his basic surgical training at Emory University in Atlanta, USA, and received his Specialist Certification in Otorhinolaryngology from the 1st Department of ORL-HNS of NKUA. He received additional training as a Senior Registrar in the East Anglia Deanery Training Scheme in the UK. He has obtained a fellowship in Phonosurgery and Laryngeal Laser Surgery in 2006 from the Department of Otorhinolaryngology – Head & Neck Surgery of the University of Louvain at Mont-Godinne University Hospital in Belgium.

International Association of Phonosurgery Invited Speakers (cont'd)

He earned his PhD degree from the NKUA in 2003 and holds a master's degree in health administration from the Hellenic Open University since 2015. He is a member of many international scientific societies and has authored numerous papers in peer – reviewed international journals, full articles and cited abstracts in conference proceedings, and chapters in national and international textbooks and books.

Markus Hess
Germany

Markus Hess, MD, otolaryngologist and phoniatrician, specialized in laryngology, phonosurgery, professional voice disorders. Head of first Voice Clinic in Germany (Medical Voice Centre), chairman of PEVOC, founder of European Academy of Voice (EAV), past president CoMeT, founder of German Society of Phonosurgery, president of International Association of Transvoice Surgeons (IATVS). Introduction of blue laser to laryngology. Long-standing experience in minimally invasive phonomicrosurgery and office-based surgery. Presentations, workshops, instructional courses at international conferences. Memberships on various editorial boards and scientific committees. Authorship in over one hundred peer-reviewed articles in professional journals and textbooks.

Lance Maron
South Africa

Lance Maron lives in Johannesburg, South Africa where he has established a multidisciplinary Voice and Swallowing Centre.

He has appeared in professional theatre, television and film productions and has combined his skills as a performing artist and medical doctor to work as resident ENT in many South African theatre productions.

He is the current president of the Laryngology Society of South Africa and regularly forms part of the academic faculty of international laryngology conferences and workshops. Dr Maron is a member of the Voice Foundation and a board-member of the International Association of Phonosurgery (IAP).

Kristiane Van Lierde
Belgium

Kristiane Van Lierde is full professor at the Ghent University, Department of Rehabilitation Sciences (more specific at CESLAS: center for Speech and Language Sciences). Her research expertise is the assessment and treatment of voice and resonance.

In this field of study, she authored until now 200 peer-reviewed publications in high-ranked A1/Q1, peer-reviewed journals. As researcher at the Ghent University she and her research team received 9 scientific awards for their research work related to voice. She is a member of the editorial board of the Journal of Voice and supervisor of several international projects. She presented her research at many national and international conferences (>120), and organized 20 (inter)national conferences.

Her clinical expertise is illustrated by her leading role as speech language pathologist of the multidisciplinary craniofacial team and the voice clinic of the Ghent University Hospital. As professor at the Ghent University, she teaches several courses in the Bachelor and Master Logopaedic and Audiological Sciences. Furthermore, she is a member of the Royal Academy of Medicine of Belgium.

General Information

Date and Venue

Laryngology Sydney 2023 will be held at Luna Park Sydney from Friday 10 November – Sunday 12 November 2023.

For further information please visit:
www.lunaparkvenues.com

Registration Desk

The registration desk will be located in the Crystal Palace and will be open during the following hours:

Friday 10 November 2023: 7:00am - 5:30pm
Saturday 11 November 2023: 6:30am - 4:30pm
Sunday 12 November 2023: 7:30am - 11:30am

Parking

Please refer to the Luna Park Sydney website at **www.lunaparkvenues.com** for information on parking and traveling to the venue.

Intention to Photograph

Please be advised that photographs may be taken during the conference and reproduced by the conference organiser. These photos may be used for the following purposes:

- Projection on-site
- Reporting on the conference online
- Marketing a future conference, including online and hard copy publications
- Publishing in RACS and LSA publications

If you do not wish to be included in a photograph, please advise the photographer.

Name Badges

Your name badge is essential for entry into scientific sessions. Please collect your conference materials from the registration desk prior to entering the sessions.

Internet Facilities

Wireless internet will be available throughout the conference. Details will be made available on-site.

Dress

Scientific Sessions: Business attire or smart casual
Welcome Reception: Business attire or smart casual
Conference Dinner: Cocktail attire

Registration Information

Full registration includes:

- Access to all scientific sessions
- Access to the industry exhibition
- Morning and Afternoon Tea and Lunch in accordance with the program
- Ticket to the Welcome Reception held on Friday 10 November 2023*

**Subject to availability at the time of booking*

One day registration includes:

- Access to all scientific sessions (as applicable)
- Access to the industry exhibition
- Morning and Afternoon Tea and Lunch in accordance with the program

Tickets to the Welcome Reception held on Friday 10 November 2023 are not included in day registration categories. Tickets must be purchased separately for the Welcome Reception.

General Information (cont'd)

Official Functions

Welcome Reception

Date: Friday 10 November 2023

Time: 5:30pm – 7:00pm

Location: Luna Park Sydney

Cost: Included for full registration categories* bookings are essential

**Subject to availability at the time of booking*

Additional tickets: $66.00 per person

Network with the academic faculty, industry and fellow colleagues whilst celebrating the opening of the conference.

Conference Dinner

Sponsored by Ambu Australia and Reflux Gourmet

Date: Saturday 11 November 2023

Time: 7:00pm – 11:30pm

Location: Luna Park Sydney

Cost: $125.00 Conference Delegate Ticket*
$150.00 Guest Tickets*
bookings are essential

**Subject to availability at the time of booking*

Enjoy a three-course dinner and entertainment with colleagues and friends.

If you would like to attend any of the above activities, please visit the team at the registration desk at the conference. Please note that the conference dinner is not included in the registration fee.

Pre-Conference Workshops

Using diagnostic imaging software for analysis of swallow biomechanics - VFSS + FEES

Sponsored by Tims Medical Distributed by INLINE

Date: Thursday 9 November 2023

Time: 8:00am – 12:00pm

Location: Level 5 Education Centre - Chris O'Brien Lifehouse, 119-143 Missenden Rd, Camperdown NSW 2050

Cost: $175.00 per person*

Includes: Morning Tea and Lunch

**Subject to availability at the time of booking. Only 50 spaces are available*

Laryngeal Injection Techniques and Advanced Laryngeal Instrumentation

Sponsored by LifeHealthCare & Smith+Nephew

Date: Thursday 9 November 2023

Time: 8:00am – 5:00pm

Location: RPA Institute of Academic Surgery, 145 Missenden Rd, Camperdown NSW 2050

Cost: $440.00 per person*

Includes: Morning tea, Lunch and Afternoon Tea

**Subject to availability at the time of booking. Only 24 spaces are available*

Introductory workshop to the clinical applications of pharyngeal high-resolution manometry with impedance (P-HRM-I) in dysphagia assessment

Sponsored by Laborie Medical Technologies Corp

Date: Thursday 9 November 2023

Time: 12:00pm – 5:00pm

Location: Level 5 Education Centre - Chris O'Brien Lifehouse, 119-143 Missenden Rd, Camperdown NSW 2050

Cost: $175.00 per person*

Includes: Lunch and Afternoon Tea

**Subject to availability at the time of booking. Only 50 spaces are available*

Business Meetings

Laryngology Society of Australasia AGM (LSA Members only)
Date: Saturday 11 November 2023
Time: 5:00pm - 6:00pm
Venue: Ted Hopkins Room, Crystal Palace, Luna Park Sydney

Posters

Posters will be displayed on the Mezzanine Level of the Crystal Palace and will be available for viewing throughout the conference.

Certificate of Attendance

A certificate of attendance will be circulated electronically at the conclusion of the conference.

Continuing Medical Education (CME)/ Continuing Professional Development (CPD) Points

This educational activity has been approved in the RACS CPD Program. RACS Fellows, Specialist International Medical Graduates (SIMGs) and surgeons participating in the RACS CPD Program can claim one point per hour (maximum of 20 hours) in Educational Activities.

RACS Fellows, participation in this activity will be entered into your RACS CPD which can be accessed through ehub. CPD points will be automatically updated for all Fellows who have provided their RACS ID when registering.

Industry Exhibition

The industry exhibition will be held in the Sunset Room, Crystal Palace Luna Park Sydney. Delegates will have the opportunity to visit industry booths in the program breaks.

Speakers' Support

Presenters are required to provide an electronic PowerPoint copy of their presentation to the Speakers' Support desk at the meeting at least one hour prior to the commencement of their session. Speakers' Support is located on the Mezzanine Level and can be accessed via the Crystal Ballroom, Crystal Palace Luna Park Sydney.

A technician will be available at the Speakers' Support desk one hour prior to the commencement of the first session and during the catering breaks from Friday 10 November to Sunday 12 November 2023.

Dietary Requirements

Please note that the venue is responsible for all catering at the conference and Laryngology Society of Australasia/RACS does not inspect or control food preparation areas or attempt to monitor ingredients used. You should contact the venue directly for all special dietary requirements during the event, irrespective of whether details have been provided to Laryngology Society of Australasia/RACS. If Laryngology Society of Australasia/RACS requests information about your dietary requirements for a specific event Laryngology Society of Australasia/RACS will endeavour to forward the information provided to the venue (time permitting). Laryngology Society of Australasia/RACS will not retain information provided for future events, so you must verify your requirements for each event. Even if information is requested or provided, Laryngology Society of Australasia/RACS takes no responsibility for ensuring that the venue acknowledges your dietary requirements or that these requirements can be met.

In all cases you must verify for yourself that your dietary requirements have been met and Laryngology Society of Australasia/RACS refutes any and all liability for any failure to adequately provide your special dietary requirements or any consequential damage resulting from such failure.

Cancellations

Cancellations must be notified in writing to: lsa@surgeons.org

A cancellation fee of 20% of the appropriate registration fee will be charged for cancellations received on or prior to Sunday 13 August 2023. Please note there will be no refunds after Sunday 13 August 2023.

Privacy Policy

Privacy Policy details can be viewed on the RACS website at www.surgeons.org/disclaimerprivacy/

Things To Do in Sydney

For further information on things you can do in Sydney, visit: www.sydney.com.

Scientific Program

Program correct at the time of publication (October 2023), however the organising committee reserve the right to change the program without notice.

Thursday 9 November 2023

Pre-Conference Workshops

8:00am – 12:00pm

Using diagnostic imaging software for analysis of swallow biomechanics - VFSS + FEES

Level 5 Education Centre - Chris O'Brien Lifehouse

Anna Miles

Sponsored by TIMS MEDICAL, Distributed By Inline Imaging Technology

8:00am – 5:00pm

Laryngeal injection techniques and advanced laryngeal instrumentation

RPA Institute of Academic Surgery

Sponsored by LifeHealthcare, Smith+Nephew

Coblation technology in the larynx
Michael Benninger

Angiolytic laser in the larynx
Guillermo Campos

Office based angiolytic laser
Markus Hess

1:00pm – 5:00pm

Introductory workshop to the clinical applications of pharyngeal high-resolution manometry with impedance (P-HRM-I) in dysphagia assessment

Level 5 Education Centre - Chris O'Brien Lifehouse

Taher Omari, Charles Cock, Mistyka Schar

Sponsored by Laborie

Download the conference app

The full scientific program is available on the conference app. To download the app please follow the steps below:

1. Search '**The Event App by EventsAir**' in the Google Play or Apple App store.

2. Once downloaded, enter the event code '**LSA2023**' 'to access the Laryngology Sydney 2023 meeting app, including speaker information, abstracts and programs etc.

Scientific Program (cont'd)

Friday 10 November 2023

7:50am – 10:00am	**Plenary Session 1** *Crystal Ballroom* Chair: Amanda Richards
7:50am	Convenor/LSA President opening address ***Daniel Novakovic***
8:00am	Welcome to Country
8:20am	IAP President - The revolution of laryngology #CoolNewStuff ***Michael Benninger - IAP Invited Speaker***
8:40am	Keynote Lecture: The neurobiological basis of malregulative voice disorders ***Maria Dietrich - Keynote Speaker***
9:10am	Plan B when plan A doesn't work ***Markus Hess - IAP Invited Speaker***
9:30am	Keynote Lecture: Glottic stenosis ***Taner Yilmaz - Keynote Speaker***
10:00am – 10:30am	Morning tea with the industry *Sunset Room*
10:30am – 12:30pm	**Plenary Session 2** *Crystal Ballroom* Chair: Laura Moroney
10:30am	Keynote Lecture: Value-based care of dysphagia: Defining predictors, biomarkers and mechanistic treatment targets - Part 1 ***Emily Plowman - Keynote Speaker***
11:00am	The nodules myth ***Guillermo Campos - IAP Invited Speaker***
11:20am	Effects of voice therapy in children with vocal fold nodules: A pilot study - Recorded presentation ***Kristiane Van Lierde - IAP Invited Speaker***
11:40am	Keynote Lecture: Vocal fold cysts, sulci and mucosal bridges - The difficult family ***Nupur Kapoor Nerurkar - Keynote Speaker***
12:10pm	The use of steroids plus 5-Fluorouracil for the treatment of vocal scarring ***Ramon Franco - IAP Invited Speaker***
12:30pm – 1:30pm	Lunch with the industry *Sunset Room*
1:00pm - 1:30pm	**Poster Sessions** *Mezzanine Level of Crystal Ballroom*
1:30pm - 3:30pm	**Plenary Session 3 - Neurolaryngology** *Crystal Ballroom* Chair: Thomas Stewart and Hayley Herbert
1:30pm	Management of unilateral vocal fold paralysis and medialization laryngoplasty ***Michael Benninger - IAP Invited Speaker***
1:50pm	Improving diagnosis and management of vocal cord paresis/ paralysis ***Lance Maron - IAP Invited Speaker***

Scientific Program (cont'd)

2:10pm	Laryngeal ultrasound for evaluation of paediatric vocal fold immobility in tertiary centre in New Zealand *Georgia Mackay*
2:20pm	A retrospective study of the demographic patterns of vocal fold paralysis and paresis pre and post the covid pandemic *Zainab Nagree*
2:30pm	Is partial arytenoidectomy better than posterior cordotomy for treatment of bilateral vocal cord paralysis? *Meet Sheth*
2:40pm	Paediatric recurrent laryngeal nerve reinnervation *Naomi Natasha Niles*
3:00pm	Questions/discussion
3:10pm – 3:30pm	Afternoon tea with the industry *Sunset Room*

Scientific Program (cont'd)

3:30pm - 5:30pm	**Plenary Session 4 - ILO, breathing and cough** *Crystal Ballroom* Chair: Claire Stanley
3:30pm	Conservative treatment of EILO with breathing retraining: The Haukland experience ***Lynn Biserøed - IAP Invited Speaker***
3:50pm	Diagnosis of inducible laryngeal obstruction: An international Delphi consensus study ***Anne Vertigan***
4:00pm	Office-based local anaesthetic transnasal flexible endoscopy: A novel technique for the diagnosis of excessive dynamic airway collapse ***Paul Paddle***
4:10pm	Speech pathology and inducible laryngeal obstruction (ILO) - Clinical perspectives on easing the flow ***Alexandra McFarlane***
4:20pm	Cardiopulmonary exercise test with continuous laryngoscopy examination (CPET-CLE): Referral criteria, protocol and outcomes at Sir Charles Gairdner Hospital ***Kate Baumwol***
4:30pm	Questions/discussion
4:35pm	Breathing pattern abnormalities in patients with inducible laryngeal obstruction and chronic cough ***Jordan Jeffrey***
4:45pm	Phenotypes in chronic cough and correlation with citric acid cough threshold test ***Sarah Emmett***
4:55pm	Referral and clinical outcomes in chronic cough and inducible laryngeal obstruction: The real world experience. ***Anne Vertigan***
5:05pm	Treatment effects of neural modulators on chronic refractory cough ***Katrina Sandham***
5:15pm	The development and implementation of a speech pathology-led first point of contact clinic for chronic cough ***Chloe Walton***
5:25pm	Questions/discussion
5:30pm – 7:00pm	**Welcome Reception** *Sunset Room*

Scientific Program (cont'd)

Saturday 11 November 2023

7:00am – 08:00am	**Breakfast Workshop** Clinical application of blue laser *Markus Hess & Guillermo Campos - IAP Invited Speakers*
7:00am – 08:00am	**Breakfast Workshop** Videostroboscopy - Tricks, tips and troubleshooting for the intermediate-advanced clinician *Kate Baumwol, Amanda Richards, Cate Madill & Danielle Stone* *Sponsored by* PENTAX MEDICAL
8:00am – 10:00am	**Plenary Session 5** *Crystal Ballroom* Chair: Nusa Naiman and Jane Bickford
8:00am	Retrograde cricopharyngeal dysfunction-series of 80+ *Jennifer Anderson - IAP Invited Speaker*
8:20am	In-office based treatment of retrograde cricopharyngeal dysfunction: An Australian experience *Sarah Emmett*
8:30am	Keynote Lecture: Neurological basis of management of spasmodic dysphonia ***Nupur Kapoor Nerurkar - Keynote Speaker***
8:50am	Keynote Lecture: Interdisciplinary management of spasmodic dysphonia: A case study ***Maria Dietrich - Keynote Speaker***
9:05am	Questions/discussion
9:15am	Clinical practices in assessment and diagnosis of voice disorders: A global multidisciplinary web survey *Christopher Payten*
9:25am	Patient completed voice case history questionnaire – A global survey of otorhinolaryngologists and speech-language pathologists *Dhanshree Gunjawate*
9:35am	Applying technique change classifications from sport's training to direct voice therapy - A new lens to guide treatment selection? *Cate Madill*
9:45am	Core outcomes and larger voice datasets: Application, implementation, challenges and opportunities *Dharshini Manoharan*
9:55am	Questions/discussion
10:00am – 10:30am	Morning tea with the industry *Sunset Room*

Scientific Program (cont'd)

10:30am – 11:00am	**Plenary Session 6** *Crystal Ballroom* Chair: Trudy Lynch
10:30am	Keynote Lecture: Value-based care of dysphagia: Defining predictors, biomarkers and mechanistic treatment targets - Part 2 ***Emily Plowman - Keynote Speaker***
11:00am – 12:30pm	**Concurrent Session 7A - Dysphagia** *Crystal Ballroom* Chair: Kylie Perkins
11:00am	Understanding user experience of pharyngeal residue interpretation tools: A cross-sectional study *Thomas Wilson*
11:10am	Normative esophageal pill and capsule transit times for esophageal screening *Georgia Mackay*
11:20am	Specialist multimodal speech pathology service for head and neck oncology patients with an altered airway: Implementation of proactive and preventative community-based care via telepractice *Madlyn Connelly*

Scientific Program (cont'd)

11:30am	Help! Is there a doctor in the house? Team member roles and practices when it comes to observing structural abnormalities on videofluoroscopy swallowing studies (VFSS) *Claire Stanley*
11:40am	They say I'm normal but I can't swallow! A case series detailing the diagnostic and treatment journey of 5 patients presenting to a private practice with functional dysphagia *Therese Dodds*
11:50am	Dysphagia - Panel Chair: Kylie Perkins *Panellists: Emma Wallace, Anna Miles, Emily Plowman, Theo Athanasiadis & Jennifer Anderson*
11:00am – 12:30pm	**Concurrent Session 7B - Papilloma, early glottic cancer and laryngeal dysplasia** *Ted Hopkins Room* Chair: Alice Coombs
11:00am	What's new in recurrent respiratory papillomatosis *Fred Dikkers - IAP Invited Speaker*
11:20am	Recurrent respiratory papillomatosis management in Australia *Anthony Rotman*
11:30am	Keynote Lecture: Early glottic cancer ***Taner Yilmaz - Keynote Speaker***
12:00pm	CO2 laser for early cancer larynx *Kumud Kumar Handa - IAP Invited Speaker*
12:20pm	Questions/discussion
12:30pm – 1:30pm	Lunch with the industry *Sunset Room*
1:00pm - 1:30pm	**Poster Sessions** *Mezzanine Level of Crystal Ballroom*
1:30pm – 2:00pm	**Plenary Session 8 - Perspectives on Pitch Altering Surgery** *Crystal Ballroom* Chair: Susie Griffiths
1:30pm	Gender affirming pitch elevation *Jennifer Anderson*
1:40pm	Investigating the outcomes of pitch raising surgery and peri-operative voice therapy *Nicole Free*
1:50pm	Keynote Lecture: Voice deepening surgery - (Relaxation LFS) ***Nupur Kapoor Nerurkar - Keynote Speaker***
2:05pm	Pitch Altering - Panel Chairs: Jennifer Oates and Thomas Stewart *Panellists: Markus Hess, Paul Paddle, Nicole Free, Nupur Kapoor Nerukar, Sterling Quinn & Jennifer Anderson*
2:40pm – 3:30pm	**Concurrent Session 9A - Voice Therapy** *Crystal Ballroom* Chair: Kate Baumwol

Scientific Program (cont'd)

2:40pm	The value of harmonics-to-noise ratio and cepstral peak prominence of vowel in differentiating disordered from non-disordered voices *Duy Duong Nguyen*
2:50pm	Efficacy of sob voice therapy on vocal pitch and voice quality of MTF transgender speakers *Cate Madill*
3:00pm	Effectiveness of voice training for trans women - The lukimon research collaboration *Sterling Quinn*
3:10pm	Use of voice activated virtual reality games in gender affirming voice training: A pilot feasibility study. *Cath Gregory*
3:20pm	Questions/discussion
2:40pm – 3:30pm	**Concurrent Session 9B - Airway** *Ted Hopkins Room* Chair: Elizabeth Hodge
2:40pm	SponTaneous respiration using IntraVEnous anaesthesia and high-flow nasal oxygen (STRIVE Hi) for adult laryngoscopy *Michael Lee*
2:50pm	Contemporary management of post-intubation phonatory insufficiency *Michael Lee*
3:00pm	American Society of Anesthesiologists difficult airway algorithm *Charanjit Bahniwal - IAP Invited Speaker*
3:15pm	Comparison of angiolytic effects between the 445-nm blue laser and the 532-nm pulsed potassium-titanyl-phosphate (KTP) laser *Duy Duong Nguyen*
3:25pm	Questions/discussion
3:30pm – 3:50pm	Afternoon tea with the industry *Sunset Room*
3:50pm – 5:00pm	**Plenary Session 10 - Functional voice disorders of psychogenic origin/functional neurological disorder** *Ted Hopkins Room* Chair: Janet Baker
3:50pm	Keynote Lecture: Neurobiological considerations in functional voice disorders of psychogenic origin/functional neurological disorder ***Maria Dietrich - Keynote Speaker***
4:20pm	Functional disorders of psychogenic origin - Panel Chair: Danielle Stone *Panellists: Maria Dietrich, Janet Baker, Cate Madill & Georgina Harris*
5:00pm – 6:00pm	**Laryngology Society of Australasia AGM** *Ted Hopkins Room*
7:00pm – 11:30pm	**Conference Dinner** *Crystal Ballroom*

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Scientific Program (cont'd)

Sunday 12 November 2023

8:00am – 10:00am	**Plenary Session 11 - Phonosurgery & outcomes** *Crystal Ballroom* Chair: Paul Paddle
8:00am	In-office steroid injection for subglottic stenosis: Effect on surgery free Interval ***Jennifer Anderson - IAP Invited Speaker***
8:10am	LT update (13 years) SILSI for treatment of iSGS in 100 patients over 13 years ***Ramon Franco - IAP Invited Speaker***
8:20am	Office-based surgery ***Anastasios Hantzakos - IAP Invited Speaker***
8:40am	Questions/discussion
8:55am	Treatment decisions for phonotraumatic lesions - A large retrospective case - Series review ***Debbie Phyland***
9:05am	A retrospective audit of intervention outcomes for phonotraumatic lesions ***Brianagh Curran***
9:15am	When the story tells the picture: Lesions among professional music theatre singers (PMTS) since COVID times ***Debbie Phyland***
9:25am	Custom-made phonosurgery ***Guillermo Campos - IAP Invited Speaker***
9:45am	Questions/discussion
10:00am – 10:30am	Morning tea with the industry *Sunset Room*
10:30am – 11:30am	**Concurrent Session 12A** *Ted Hopkins Room* Chair: Georgina Harris
	Tricky Surgery for tricky cases - Panel ***Panellists: Daniel Novakovic, Nupur Kapoor Nerurkar, Taner Yilmaz, Guillermo Campos, Anastasios Hantzakos & Ramon Franco***
10:30am – 11:30am	**Concurrent Session 12B** *Crystal Ballroom* Chair: Debbie Phyland
	Splaryngology Summit - Panel ***Panellists: Claire Stanley, Laura Moroney, Christopher Payten, Danielle Stone, Anne Vertigan & Kate Baumwol***
11:30am – 12:30pm	**Plenary Session 13** *Crystal Ballroom* Chair: Cate Madill and Paul Paddle
11:30am	Different perspectives on complex cases - Panel ***Panellists: Cecilia Pemberton, Amanda Richards, Debbie Phyland, Lance Maron, Michael Benninger & Lynn Biserøed***
12:30pm – 12:45pm	**Close of Conference and Awards**
12:30pm	Closing Address ***Danielle Stone***

Abstracts

Keynote Lecture: Glottic stenosis

Taner Yilmaz - Keynote Speaker
Hacettepe University Faculty of Medicine, Department of Otolaryngology-Head & Neck Surgery, Ankara, Turkey

Glottic stenosis can be classified as anterior glottic web, bilateral vocal fold immobility (BVFI) and posterior glottic stenosis (PGS).

Glottic stenosis may be congenital or acquired. Common acquired causes of glottic stenosis include prolonged intubation, neck trauma and intralaryngeal trauma due to surgery and radiation therapy.
Treatment options for BVFI and PGS include posterior cordotomy unilateral/bilateral; partial arytenoidectomy unilateral/bilateral; microtrapdoor mucosal flap; PGS scar excision + CAJ mobilization + lysis of IA muscle + interarytenoid mucosal flap/postcricoid mucosal flap/piriform sinus medial wall mucosal flap + external suture lateralization of vocal folds (unilateral/bilateral) and posterior cricoid split + costal cartilage graft. Each surgical technique will be demonstrated with intraoperative pictures and videos.

Anterior glottic web can be treated by endoscopic vs. laryngofissure approach; laser vs. cold instruments may be used. It can be treated in a single stage vs. two stages; the surgeon may or may not use keel. Butterfly mucosal flap technique is a single stage endoscopic approach without keel; it is useful for thin glottic webs, especially post-papilloma webs. This technique will be demonstrated with intraoperative pictures and video.

Keynote Lecture: Vocal fold cysts, sulci and mucosal bridges - The difficult family

Nupur Kapoor Nerurkar - Keynote Speaker

Cysts, sulci and mucosal bridges of the vocal folds are often found in association with one another and this may be due to a possible congenital etiology common to all. Phonotrauma has also been proposed as one of the etiologies. A 10-year study of the etiopathogenesis of glottic cysts with a study of seromucinous glands in the vocal folds shall be discussed. Cysts, especially when attached to the ligament may be challenging to excise as the concern is regarding healing getting worse the deeper one operates in the lamina propria. A complete excision of the cyst wall is important in order to prevent recurrence.

Sulci are probably the most challenging benign condition to treat in phonosurgery with a plethora of surgeries described for them. Diagnosis itself may be challenging depending on the length and depth of the sulcus.
The various classification systems proposed over the years shall be discussed. The sulcus patient should be adequately counselled regarding the vocal expectations post-surgery and regarding the possible prolonged voice therapy needed. Recent additions in management include HGF and BFGF injections. A novel surgery called LASR shall also be discussed.

Mucosal bridges of the vocal fold may be thin, thick or incomplete. This classification will be discussed along with management options. The gold standard of care for the management of mucosal bridges and sulci needs to be established with continued research.

Abstracts (con'd)

Laryngeal ultrasound for evaluation of paediatric vocal fold immobility in tertiary centre in New Zealand

Georgia Mackay [1], Dr Silva Marinone Lares [1], Dr Sita Clark [2], Dr Sheneen Meghji [1], Dr Craig McCaffer [1]
[1] Starship Child Health, Auckland, New Zealand, [2] Auckland District Health Board, Auckland, New Zealand

The gold standard for diagnosing vocal fold immobility (VFI) is awake flexible laryngoscopy (AFL). In children, AFL may be challenging with potential complications. Laryngeal ultrasound (LUS) is a non-invasive method to investigate VFI, that is gaining popularity. Accuracy of LUS has not been assessed in the New Zealand paediatric population.

Methodology: A retrospective review comparing patients having both LUS and laryngoscopy (either AFL or laryngobronchosocpy (LB)) in our tertiary paediatric centre between July 2020 and January 2023. Patients were excluded if there was uncertainty regarding VFI on laryngoscopy. Sensitivity, specificity, positive predictive value, negative predictive value, and Cohen's kappa coefficient of LUS versus laryngoscopy for VFI identification were calculated.

Results. Results from 21 patients having LUS from July 2020 to January 2023 (0-7 years) were suitable for analysis. There were 14 cases of VFI which were identified on LUS and laryngoscopy (100% agreement). In the case of bilateral vocal fold motion, LUS was correct in 5 out of 7 cases. This demonstrates excellent sensitivity of 1.00 (1.00-1.00), specificity of 0.71 (0.38-1.00). Positive predictive value was 0.88, negative predictive value was 1 and Cohen's kappa coefficient was 0.77. The p-value was 0.1573.

Conclusion. LUS is a non-invasive adjunct to laryngoscopy in paediatric patients with suspected VFI who may not tolerate laryngoscopy.

1. Hamilton CE, Su E, Tawfik D, Fernandez E, Veten A, Conlon T, et al. Assessment of Vocal Cord Motion Using Laryngeal Ultrasound in Children: A Systematic Review and Meta-Analysis. Pediatr Crit Care Me. 2021;22(10):e532–9.

A retrospective study of the demographic patterns of vocal fold paralysis and paresis pre and post the covid pandemic

Dr Nupur Kapoor Nerurkar [1], Ms Zainab Nagree [1], Dr Deepak Dinesh Singhal [1]
[1] Bombay Hospital Voice and Swallowing Centre, Mumbai, India

Purpose: Vocal fold paralysis/paresis refers to absent/decreased movement of vocal folds secondary to neurological involvement. It may result in voice, swallowing and occasionally airway disturbances. The objective of our study is to audit and examine any changes in the demographic patterns of vocal fold paralysis /paresis prior to & post the onset of the covid pandemic.

Methodology: This retrospective study examines patient records in a tertiary care voice and swallowing centre. Demographic details such as sex, symptoms, etiology, and stroboscopic examination was collected. The data was divided into two groups: April2018 – March2020 (Pre-pandemic - Group1) and April2020 – March2022 (Post onset of pandemic - Group2).

Results: In Group1out of a total of 1432 patients, 205 (14.3%) were diagnosed with vocal fold paralysis/paresis as compared to the group2; where out of 606 patients, 133 (21.9%) had vocal fold paralysis/paresis. This increase was significant (p=<.0001). The most common etiology in both the groups was idiopathic, 44.4% in group1 and 42.1% in group2. There was no significant increase (p=0.68) of the idiopathic etiology in both groups. The number of laryngeal growth attributing to vocal fold paralysis/paresis increased from 8.3% in the group1 to 18.8% in group2, which was significant (p=0.0001). It is possible that the growth itself may be responsible for some decreased mobility in both groups.

Conclusion: A increase in the number of paralysis/paresis patients was found once the pandemic started. This increase was not of idiopathic cases suggesting that covid virus or immunization was not responsible for the increase.

Abstracts (con'd)

Is partial arytenoidectomy better than posterior cordotomy for treatment of bilateral vocal cord paralysis?

Dr Meet Sheth [1], Dr Justin Ebenezer [1], Dr Roshna Rose Paul [1], Dr Suma Susan Mathews [1], Dr Rita Ruby Anbuselvi [1]
[1] Christian Medical College (CMC Vellore), Vellore, India

Purpose of study: To compare treatment success achieved by partial arytenoidectomy (with a mucosal flap cover) and posterior cordotomy in cases with bilateral abductor paralysis without airway stenosis.

Methods: Subjects who underwent partial arytenoidectomy or posterior cordotomy for bilateral abductor palsy were retrospectively analysed. Cases with airway stenosis or arytenoidectomy done for other aetiologies were excluded. All surgeries were done by trained laryngologists using the same technique with CO2 laser. Primary outcome variables were requirement of revision surgery and complete resolution of stridor. Complications were noted.

Results: None of the 11 patients undergoing arytenoidectomy required revision surgery, and 1/11 continued to have mild stridor only exertion. In the cordotomy arm, 11/55 required repeat surgery and 19/55 continued to have some noisy breathing after the first surgery. Comparison done using two group proportion test (MedCalc software version 15.6.1.0.) showed statistically significant reduction in requiring repeat surgery in the arytenoidectomy arm (difference=0.20%; $p<0.001$). Complete resolution of stridor also showed a trend towards significance favouring the arytenoidectomy arm (difference=0.250%, $p=0.0573$). No subjects in the arytenoidectomy arm had post operative granuloma, dysphagia/aspiration or posterior glottic stenosis. None in the arytenoidectomy arm showed significant drop in voice. The proportion of these adverse effects were more in the cordotomy arm.

Conclusion: Success for stridor resolution seems to be higher with partial arytenoidectomy (with mucosal flap cover) than posterior cordotomy. Prospective randomised controlled studies are warranted to accurately compare these modalities.

Paediatric recurrent laryngeal nerve reinnervation

Naomi Natasha Niles [1], Dr Sam Hwang [1], Dr Alan Cheng [1]
[1] Royal Prince Alfred Hospital, Camperdown, Australia

Purpose: Paediatric unilateral vocal cord palsy (UVCP) can be congenital or acquired and refers to immobility of a vocal cord due to disruption of its motor nerve supply. Management is based on symptomatology, and surgical intervention may be required. Recurrent laryngeal nerve (RLN) reinnervation in adults is well documented, and its use in the paediatric population has been popularised recently. However, experience in this group remains limited. We report the first 4 cases of RLN reinnervation at Westmead Children's Hospital, Australia and discuss our experience with and outcomes from this procedure.

Methods: We conducted a retrospective review of a single surgeon series of four consecutive paediatric patients that underwent RLN reinnervation between 2014 and 2018. Formal vocal acoustic and perceptual assessments were carried out. All 4 patients underwent left RLN re-innervation with anastomosis of a branch of ansa cervicalis to the left RLN.

Results: The procedure was well tolerated, with short operating time, no post-operative complications and early discharge from hospital. Improvements were noted in objectives measures of voice. Perceptual assessment by the parents, physicians and speech therapists indicated noticeable and progressive improvement in voice post-operatively.

Conclusion: Multiple treatment modalities exist to address UVCP, and the chosen intervention must be tailored to the patient at hand. In our centre, we have found RLN reinnervation for paediatric UVCP to be a safe procedure that, with appropriate patient selection, can be very effective in improving the patients' symptoms of dysphonia and dysphagia.

Abstracts (con'd)

Conservative treatment of EILO with breathing retraining: The Haukland experience
Lynn Biserøed - IAP Invited Speaker

Exercise-induced laryngeal obstruction (EILO) is a common cause of exertional breathing problems in young individuals, caused by paradoxical inspiratory adduction of laryngeal structures. The diagnose is confirmed with contionous laryngoscopy with video during high-intensity exercise (CLE test). Currently applied treatment is mainly conservative treatment with breathing retraining and biofeedback. Clinical experience is that near 10% of EILO patients are referred for surgery. An ongoing randomized controlled trial at Haukeland University Hospital, Norway, is aimed at providing evidence-based information on conservative treatment schemes and will contribute to international guidelines in time.

Diagnosis of inducible laryngeal obstruction: An international Delphi consensus study
Dr Paul Leong[1], *A/Prof Anne Vertigan*[1]
[1] *Monash Medical Centre, Melbourne, Australia*

Purpose: Inducible laryngeal obstruction (ILO), characterised by breathing difficulties in association with excessive supraglottic or glottic laryngeal narrowing, can be challenging to diagnose and treat. The condition can occur independently, but may also be comorbid with other disorders or mimic them. Presentations span multiple specialities and misdiagnosis or delayed diagnosis is commonplace. The aim of this study was to establish consensus-based diagnostic criteria and methods for ILO

Methods: We performed a modified two-round Delphi between 7 December 2021 and 14 March 2022. In Round 1, experts provided open-ended statements which were categorised, de-duplicated, and amended for clarity. These were presented to experts for agreement ranking in Round 2, with consensus defined as ≥70% agreement.

Results: Results were discussed at two international subject-specific conferences in June 2022. Both rounds were completed by 47 international experts. In Round 1, 1102 qualitative responses were received. Of the 200 statements presented to experts across two rounds, 130 (65%) reached consensus. Experts agreed on a diagnostic definition for ILO, endorsed the concept of ILO phenotypes, and clinical descriptions. The panel agreed that laryngoscopy with provocation is the gold standard for diagnosis and that ≥50% laryngeal closure on inspiration, or Maat grade ≥2, define abnormal laryngeal closure indicative of ILO.

Conclusion: This Delphi reached consensus on multiple aspects of ILO diagnosis, and management. This process was successful in informing clinical practice and facilitating additional research.

Abstracts (con'd)

Office-based local anaesthetic transnasal flexible endoscopy: A novel technique for the diagnosis of excessive dynamic airway collapse

A/Prof Paul Paddle [1,2,3], Dr Clement Chia [1,2,3], A/Prof Debbie Phyland [1,2,3]

[1] Department of Otolaryngology, Head and Neck Surgery, Monash Health, Clayton, VICTORIA, Australia, Clayton, Australia, [2] Department of Surgery, Faculty of Medicine, Nursing an dHealth Sciences, Monash University, Clayton, Australia, [3] Melbourne Voice Analysis Centre, East Melbourne, Australia

Aims: Excessive dynamic airway collapse (EDAC) can mimic ILO, COPD and asthma, but treatment paradigms of EDAC differ from these conditions. Dynamic bronchoscopy is the gold standard of diagnosis, with dynamic CT a noninvasive alternative. This case series describes the use of office-based local anaesthetic transnasal flexible dynamic endoscopy as a novel approach for the diagnosis of EDAC.

Methodology: 24 patients underwent transnasal tracheo-bronchoscopy for the investigation of dyspnoea. Patients' history, examination, investigations, management and follow up were extracted from patient files.

The scope was passed trans-nasally, down to the level of secondary bronchi. Some patients exerted themselves immediately prior to endoscopy. Patients were also provided visual feedback of their condition and breathing techniques. De-identified videos of 20 of these endoscopies, of patients both with and without a diagnosis of EDAC, were provided to two respiratory physicians for review, to assess agreement and intrarater reliability.

Results: 14 out of 24 patients demonstrated positive findings for EDAC, with luminal narrowing of >50% of the trachea and main bronchi. The transnasal approach was very well tolerated. On review, two respiratory physicians agreed with the diagnosis of EDAC in 70% of cases, with an inter-rater reliability of 80%. Intrarater reliability was 100%, with both clinicians coming to the same diagnosis when showed the same video twice

Conclusion: This is the first reported use of in-office, local anaesthetic transnasal flexible endoscopy as a novel alternative to sedation bronchoscopy and dynamic CT, for the diagnosis and subsequent management of EDAC, with a high inter-rater reliability.

Speech pathology and inducible laryngeal obstruction (ILO) - Clinical perspectives on easing the flow

Ms. Alexandra McFarlane [1,2], A/Prof Debbie Phyland [1,3], Ms. Meg Brear [1]

[1] Voice Medicine Australia, East Melbourne, Australia, [2] The University of Melbourne, Parkville, Australia, [3] Monash Health, Melbourne, Australia

Purpose: Inducible laryngeal obstruction (ILO) is a complex functional airway obstruction disorder, the heterogeneity of which has resulted in a lack of standardised assessment and therapy procedures. Speech pathology intervention with laryngeal retraining therapy (LRT) is often the first treatment for ILO, however, predictors of LRT success have not been researched. This study aims to investigate patterns of responsiveness and outcome predictors in a cohort of patients with ILO who received LRT.

Methodology: A retrospective single cohort study was conducted with patients presenting with ILO who received LRT. The medical files of 229 participants were reviewed. Demographic information, ILO presentation and frequency and LRT responsiveness was obtained. Outcomes included clinician-derived ratings of symptom improvement after LRT (CROM) and patient recorded outcome measures (PROM).

Results: Overall, 229 patients with ILO were included in the analyses. As measured by CROM, 81% improved after LRT, with 32% experiencing complete resolution of symptoms following LRT. Gender was not a significant predictor of LRT success ($p = 0.836$). ILO episode frequency was a significant indicator of improvement ($p<0.01$), with episodic ILO (<1 episode per week) associated with complete LRT success and continuous ILO with poorer outcomes. ILO phenotype was not found to be a predictor of LRT benefit ($p = .506$) with 78% of ILO and 83% of ILO+ patients experiencing symptom improvement.

Conclusion: This study provides a strong case for LRT as the primary treatment of ILO and provides preliminary evidence for predictors of LRT outcomes, which can aid decision-making for efficient treatment pathways.

Abstracts (con'd)

Cardiopulmonary exercise test with continuous laryngoscopy examination (CPET-CLE): Referral criteria, protocol and outcomes at Sir Charles Gairdner Hospital

Ms Kate Baumwol [1], Dr Alice Crawford [1], A/Prof John Blakey [1]
[1] Department of Respiratory Medicine, and Speech Pathology, Sir Charles Gairdner Hospital, Nedlands, Australia, [2] School of Medicine Curtin University, Bentley, Australia, [3] Internal Medicine, University of Western Australia, Nedlands, Australia

Background: Exercise-induced laryngeal obstruction (EILO) is recognised as a driver of exertional dyspnoea . Cardiopulmonary exercise tests (CPET) are widely used to investigate undifferentiated breathlessness. Pairing CPET with continuous laryngoscopy during exercise (CLE) is the gold standard to diagnose EILO. However, CPET-CLE is not routinely offered in Australasia. We present our CPET-CLE referral criteria, protocol, safety, feasibility, and value of this service.

Methods: All patients were reviewed by an experienced respiratory specialist and speech pathologist. Patients underwent guideline-based investigations including blood tests, lung function, and bronchial provocation tests prior. CPET was undertaken using a standard ramped protocol on a cycle ergometer. Laryngoscopy was completed and recorded using an Olympus 2.6mm flexible laryngoscope secured on a bespoke headset. Laryngeal images during exercise were rated using the MAAT scoring system.

Results: A retrospective review of 18 patients (12 females) who underwent CPET-CLE through Sir Charles Gairdner Hospital Multidisciplinary Airways Clinic was completed. Age range was 16–58 years (mean 32.5). Twelve were competitive athletes at state-level or above. CPET-CLE was mostly well tolerated. All participants had acceptable views of the larynx. 16/18 reached or exceeded their predicted maximal oxygen uptake during testing; nevertheless the other 2 were diagnostic. The cause of dyspnoea was answered in 14 cases (4 had both normal CPET and laryngoscopy). Seven met the criteria for EILO (6 subglottic variant) with mean MAAT score of 4.5, range 3-9.

Conclusion: CPET-CLE offered in a specialist multidisciplinary setting is a safe and valuable diagnostic tool in investigating disproportionate exertion breathlessness impairing performance.

Breathing pattern abnormalities in patients with inducible laryngeal obstruction and chronic cough

Mrs Jordan Jeffery [2], A/Prof Anne Vertigan[2], Ms Sarah Bone [1], Prof Peter Gibson [1]
[1] Asthma and Breathing Research Centre, Hunter Medical Research Institute, Newcastle, Australia, [2] Department of Speech Pathology, John Hunter Hospital, Newcastle, Australia

Purpose: Breathing pattern disorder (BPD) may be defined as an alteration in the usual biomechanical pattern(s) of breathing, resulting in transient or chronic symptoms (1). The relationship between BPD and ILO/CC is unclear however there are some similarities in symptoms between the two conditions. While there may be an association between BPD and ILO/CC, the prevalence and characteristics of breathing pattern abnormalities in these conditions requires further evaluation. The aim of this study was to describe breathing pattern abnormalities in patients with ILO/CC.

Methodology: This cross-sectional observational study included 593 patients referred to speech pathology for treatment of ILO/CC. Patients were assessed by a speech pathologist using questionnaires, voice assessment, and clinical observation of breathing rate, route and location.

Results: Most participants (78%) had at least one breathing pattern abnormality. The most common was upper chest breathing (73%) followed by rate (26%) and then route (34%). There was no difference in patient reported symptom severity ratings between those with and without breathing pattern abnormalities. Further, there was no association between breathing pattern abnormalities and therapy outcomes.

Conclusion: Breathing pattern abnormalities are common in patients referred to speech pathology for assessment and treatment of ILO/CC but are not associated with worsening symptoms or poorer therapy outcomes. The relationship between BPD and ILO/CC is unclear and may be bidirectional or causal in nature.

1. Barker, N. and M.L. Everard, Getting to grips with 'dysfunctional breathing'. Paediatr Respir Rev, 2015. 16(1): p. 53-61.

Abstracts (con'd)

Phenotypes in chronic cough and correlation with citric acid cough threshold test

Dr Sarah Emmett [1], Ms Kate Sandham [1], Dr Duy Duong Nguyen [1], A/Prof Daniel Novakovic [1]
[1] DLVP, The University of Sydney, Sydney, Australia

Background: Patients with chronic cough are a common presentation to the laryngology clinic, and can present a diagnostic challenge for the clinician particularly when features of laryngeal hypersensitivity as well as reflux symptoms are present. We aimed to determine whether it is possible to distinguish these patients based on patient reported outcome measures (PROMs) including the Reflux Severity Index (RSI) and Newcastle Laryngeal Hypersensitivity Questionnaire (NLHQ); and citric acid cough threshold test (CACTT) results.

Methods: All patients aged >18yrs presenting with chronic refractory cough who underwent a CACTT between November 2018 and April 2023 were included. Retrospective data was collected from medical records including demographics, symptoms, PROMs, reflux management, and CACTT results.

Results: 138 patients were eligible for inclusion in this study. Mean age was 61yrs (range 22-89yrs); and the majority of patients were female (n=99, 71.7%). Following reflux treatment, both RSI (p=0.001) and NLHQ (p<0.001) were significantly different between patients with a moderately or highly sensitive CACTT compared with those with a borderline or normal CACTT. RSI and NLHQ post reflux treatment together also significantly differentiated patients with moderately or highly sensitive CACTT from those with a borderline or normal CACTT (p=0.004) with a sensitivity of 61.4% and specificity of 68.1%. On logistic regression, following reflux treatment, RSI was not a significant predictor of sensitivity on CACTT, however, NLHQ showed a trend towards predicting sensitivity (p=0.072).

Conclusions: PROMS provide a useful clinical adjunct for distinguishing patients with moderate to highly sensitive cough from those with borderline or normal CACTT.

Referral and clinical outcomes in chronic cough and inducible laryngeal obstruction: The real world experience.

A/Prof Anne Vertigan [1]
[1] John Hunter Hospital, New Lambton, Australia

Purpose: The aim of this paper was to describe referral and clinical outcomes for patients with chronic cough (CC) and Inducible Laryngeal Obstruction (ILO) who are referred to speech pathology in a clinical setting.

Methods: This cross sectional analytic study, conducted at a tertiary referral centre, included 851 patients with CC and/or ILO referred for speech pathology intervention. The study involved a retrospective medical record review of referral outcome, sessions attended, treatment adherence and treatment outcome. Features of treatment adherence (rated as good or poor) included attendance, home practice, accuracy of home practice and application of recommended exercises.

Results: One fifth of referred patients never attended an appointment in speech pathology and 581 attended at least once. Most patients attended between two and four therapy sessions. Just over one third of participants completed all prescribed sessions, and of these most (93%) had a successful treatment outcome. Home practice and attendance at appointments were rated as good in 75% of patients and application of recommended strategies and accuracy of home practice was good in 66%.

Conclusion: This study demonstrated a positive outcome in patients who complete the prescribed treatment. However further research regarding strategies to maximise treatment adherence and reduce treatment drop out are needed.

Abstracts (con'd)

Treatment effects of neural modulators on chronic refractory cough

Ms Katrina Sandham [1,2], Dr Duy Duong Nguyen [1,4], A/Prof Daniel Novakovic [1,2,3]

[1] Voice Research Laboratory, Discipline of Speech Pathology, Faculty of Medicine and Health, The University of Sydney, Sydney, Australia, [2] Sydney Voice and Swallowing, St Leonards, Australia, [3] The Canterbury Hospital, Campsie, Australia, [4] National Hospital of Otorhinolaryngology, Hanoi, Vietnam

Aims: To examine the efficacy of neural modulators, Amitriptyline and Gabapentin on treatment of chronic refractory cough (CRC) and factors predicting outcomes.

Method: Retrospective data review of 102 successive patients (72 female, 31 male) in a private otolaryngological database between 2013 and 2023. Mean patient age was 56.5 years (standard deviation: 13.5; range: 21 to 83). Outcome measures included Cough Severity Index (CSI) and Newcastle Laryngeal Hypersensitivity Questionnaire (NLHQ).

Results: Significant main effects of treatment were observed for CSI with no interaction effect between treatment and citric acid cough sensitivity. In the cough hypersensitivity group, CSI scores dropped by 9.2 ($p < 0.001$) and in non-sensitivity group, CSI dropped by 9.5 post-treatment ($p = 0.001$). For NLHQ, there was no significant treatment effect ($p = .498$) and no interaction effect between treatment and cough sensitivity ($p = .153$). "Response to NM" was defined as a drop in CSI > 4 points. None of PROM measures significantly predicted response to NM. Chemical triggers significantly predicted response to NM whilst cough sensitivity and thermal, mechanical, and sensation triggers did not predict response. Response to superior laryngeal nerve block also did not predict response to NM.

Conclusions: The findings appeared to imply therapeutic effects of neural modulators on CRC. Cough sensitivity, thermal, mechanical, sensation triggers and positive response to superior laryngeal nerve block did not predict response to NM but chemical triggers predict response to neural modulators.

The development and implementation of a speech pathology-led first point of contact clinic for chronic cough

Dr Chloe Walton [1], Dr Tim Ryder [2], Mrs Marnie Seabrook [1], Dr Greg Kyle [3], Dr Anna Rumbach [4]

[1] Speech Pathology Department, Integrated Specialist ENT Service, Logan Hospital, Metro South Health, Queensland Health, Meadowbrook, Australia, [2] Respiratory Medicine, Division of Medicine, Logan Hospital, Metro South Health, Queensland Health, Meadowbrook, Australia, [3] Centre for Functioning and Health Research (CFAHR), Metro South Health, Brisbane, Australia, [4] School of Health & Rehabilitation Sciences, The University of Queensland, Brisbane, Australia

Purpose: Chronic Cough (CC) has a significant impact on quality of life and is typically considered low risk i.e. without apparent lung disease with patients waiting> 12 months to see a Respiratory specialist. Common benign causes of CC can be effectively managed by Speech Pathology (SP) interventions using a protocol-driven approach. A SP CC – First Point of Contact (SP CC-FPOC) clinic was developed to manage low-risk patients with CC. Aims: To determine the feasibility, timeliness, and outcomes of an SP CC-FPOC clinic using service and consumer data.

Methodology: More than 100 patients identified as low risk by Respiratory case review were delegated to the SP-led CC-FPOC clinic based at Logan Hospital using clinical inclusion criteria. All delegated patients underwent a battery of assessments to determine the likely cause of their cough which was completed by an Advanced SP who had completed upskilling and supervised training. The patients were provided education and management by the SP. A joint case management discussion with the SP and Respiratory Physician reviewed the management plan and patients were subsequently removed from the specialist OPD WL.

Results: The SP CC-FPOC clinic demonstrates high patient engagement (100% acceptance), timely access to services (Average wait < 30 days), (< 1% re-referral to Respiratory Waitlist, (n=1), and high patient satisfaction.

Conclusion: This new model of service delivery demonstrates service and consumer feasibility for a SP-led CC-FPOC clinic that provides effective, timely, and safe management to a cohort of patients who present with CC and associated laryngeal conditions.

Abstracts (con'd)

In-office based treatment of retrograde cricopharyngeal dysfunction: An Australian experience

Dr Sarah Emmett [1], Mrs Kate Sandham [1], Dr Thomas Stewart [1], A/Prof Daniel Novakovic [1]
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Introduction: Retrograde cricopharyngeal dysfunction (RCPD) is a relatively new diagnosis characterised by an inability to burp. The typical management of this condition is injection of Botulinum A toxin (BTX-A) into cricopharyngeus (CP). While BTX-A injection is usually performed under general anaesthetic, in-office based EMG-guided injection is becoming increasingly accepted as an alternative technique in these patients.

Methods: A retrospective chart review was conducted of all RCPD patients seen at a single institution between January 2018 and July 2023. Demographics and clinical data including treatment information were extracted from the medical records.

Results: 50 patients underwent treatment for RCPD. 24 patients were female (48%). The mean age was 31 years (range 20-57 years). 47 patients (94%) underwent initial treatment under GA, with between 50-100 units of BTX-A injected into CP. 12 patients underwent in-office EMG-guided BTX-A into CP. Of these, one patient (2%) underwent in-office treatment due to inability to gain access under general anaesthetic; 8 patients (17%) required additional treatment following treatment under GA due to an inadequate symptomatic response, and 3 patients opted for initial treatment under LA. Three patients had unilateral abduction lag following in-office BTX-A treatment with preserved range of motion. Two patients (4%) required repeat injection of BTX-A under GA.

Conclusions: In-office Botulinum-A toxin is a safe and viable technique for management of patients with RCPD with difficult trans-oral access or inadequate response to initial treatment.

Keynote Lecture: Neurological basis of management of spasmodic dysphonia

Nupur Kapoor Nerurkar - Keynote Speaker

Over the years, with increasing research, different and multiple theories have been proposed for the etiopathogenesis of spasmodic dysphonia and vocal tremor.

Consequently, the management options are multiple, each attempting to address the varied neurological basis of SD.

The talk shall focus on the various etiologies proposed for SD with a flowchart of medications, procedures and surgeries recommended as per the neurological basis.

Abstracts (con'd)

Clinical practices in assessment and diagnosis of voice disorders: A global multidisciplinary web survey

Mr Christopher Payten [1,3], Dr Kelly Weir [2], Dr Cate Madill [3]
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Purpose: Published best practice guidelines and standardized protocols for voice assessment recommend multidisciplinary evaluation utilizing a comprehensive range of clinical measures. Previous studies report variations in assessment practices when compared with these guidelines. This study aims to present a current snapshot of the global multidisciplinary practice in diagnostic voice assessment for adults, and to explore clinicians' views on assessment utility.

Methods: A 48-item voluntary anonymous web survey was administered between September 2022 and March 2023. Eligible participants were registered Speech-Language Pathologists (SLPs) and Otolaryngologists (ENTs) working in the national health systems worldwide with any level of experience.

Results: Responses from 88 SLPs and 21 ENTs from 18 countries with a range of 1->25 years' experience were analysed. ENT-initiated and interdisciplinary assessment models were most frequently described, whereas SLP-initiated pathways were also reported by more than 50%. Case history was the most frequently valued assessment tool, followed by laryngoscopy, then auditory-perceptual evaluation. Most clinicians favoured non-validated measures for auditory-perceptual assessment, whilst standard practices utilizing voice recordings and acoustic measures was variable. Respondents gave equal weighting to ENT and SLP evaluation to aid diagnosis of muscle tension voice disorder and functional voice disorder.

Conclusions: This study provides important insights to the current multidisciplinary practice patterns of ENTs and SLPs in the assessment of adults with voice disorders and their preferred utilization of clinical assessment tools. In addition, it highlights areas where clinical practice does not align with the currently available best practice guidance.

Patient completed voice case history questionnaire – A global survey of otorhinolaryngologists and speech-language pathologists

Dr Dhanshree R Gunjawate [1], Ms Antonia Chacon [1], Dr Duy Duong Nygen [1], Dr Daniel Novakovic [1], Dr Cate Madill [1]
[1] Dr Liang Voice Program, Faculty of Medicine and Health, The University of Sydney, Sydney, Australia

Purpose: Case history has been highest ranked assessment in the diagnosis and classification of specific voice disorders. Standardized protocols have been developed for voice assessment; however, no standard questionnaire exists to collect case history data for people with voice disorders. The purpose of this survey of ENTs and SLPs is to identify questions to be included in a patient-completed voice case history questionnaire.

Methodology: Three hundred and sixteen questions identified in a recent scoping review of patient-reported case history questionnaires were consolidated by two independent investigators to identify the categories and subcategories. A final survey tool was developed, comprising of 217 questions across the following categories identifying information, onset, vocal symptoms, vocal use, perception of problem, health status or medical conditions, associated symptoms, lifestyle factors, psychological factors, environmental factors, medications, treatment, others. A cross-sectional Qualtrics-based global survey is ongoing among ENTs and SLPs through direct emails, circulation through professional groups and social media platforms.

Results: Based on preliminary findings, most respondents work with adults with voice problems several times a week. A good global distribution of respondents has been obtained. Overall, the importance of including case history questionnaire was rated to be more than 70%. The most selected categories included perception, onset, voice use, lifestyle, and environmental factors.

Conclusions : The findings of the survey will help in defining a set of core categories and specific questions to be included in a patient-completed voice case history questionnaire.

Abstracts (con'd)

Applying technique change classifications from sport's training to direct voice therapy - A new lens to guide treatment selection?

Dr Cate Madill [1], Joe Vecchione, Dr Nichola Hodges
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Purpose: Technique change is foundational to the ongoing process of any movement skill acquisition and expertise within a movement domain. There are numerous direct voice therapies that change voice technique, that can be used to treat the same disorder with few indications of which therapy should be selected and when. The purpose of this work was to map methods of technique change recently described and categorised for self-paced motor tasks in sport onto voice therapy methods.

Methods: Six technique change methods described in the sports' training literature were selected: Negative Practice, Error amplification/augmentation, Constraints Led approach, the Five A Model, identification Control-Correction Program and Traditional (direct instruction approach), which have been associated with three types of application scenarios that differ in the context and severity of the change: i) Relearning and Resisting, ii) Refinement and iii) Regaining. Descriptions of individual direct voice therapy techniques found in the literature informed our mapping of these techniques to the six technique change method and three types of application contexts.

Results: Where descriptions of voice therapy techniques were sufficiently described, all could be mapped onto the technique change methods and types of application.

Conclusion: Conceptualisation of voice therapy through the lens of classification of technique modification based on self-paced motor tasks in sports, provides deeper insight into the differences and commonalities of the numerous direct voice therapies described in the literature. This work will help to inform when certain therapies should be used and provide a framework for predicting (and empirically testing) effectiveness.

Core outcomes and larger voice datasets: Application, implementation, challenges and opportunities

Ms Dharshini Manoharan [1], Antonia Chacon [1], Dr Daniel Novakovic [1], Dr Duy Duong Nguyen [1], Dr Dhanshree Gunjawate [2], Mr Rijul Gupta [2], Dr Craig Jin [2], Dr Cate Madill [1]
[1] University of Sydney, Dr Liang Voice Program, Faculty of Medicine and Health, Australia, [2] University of Sydney, Faculty of Engineering, Australia

Purpose: Data registries facilitate impactful research through data pooling, collaboration, and preservation of data. While there are publicly available voice databases with voice recordings, demographic and diagnostic information, many databases have inconsistencies and critical limitations which impact the utility of the data. The University of Sydney Voice Assessment Clinic (USVAC) database has been developed from a comprehensive multidisciplinary, university-based voice assessment clinic. This study reviews the data collected, the resources required, the processes of data collection as well as the outputs and opportunities from the database.

Method: All patient data collected prior to and during the 75-minute assessment were analysed for consistency and reliability, including case history, patient-reported outcome measures, pitch discrimination scores, auditory-perceptual ratings, acoustic/aerodynamic measures, visual imaging, and diagnostic information. The time taken to collect and process each data point was analysed. Analysis of challenges to accurate and reliable data collection were identified. A cost analysis was then compared to benefits as measured by research outputs and improvements to clinical processes.

Results: Collecting high-quality, comprehensive voice data is time-consuming and resource intensive. Known challenges such as inconsistency in terminology are mitigated by adhering to research frameworks and using drop-down lists. While time-consuming, the database has allowed increased research output, the discovery of new knowledge and the commencement of AI projects which aim to improve diagnostic processes.

Conclusion: Good quality, large datasets create opportunities for impactful research. However, it is resource-intensive, and these barriers need to be overcome to harness the potential of data.

Abstracts (con'd)

Understanding user experience of pharyngeal residue interpretation tools: A cross-sectional study

Mr Thomas Wilson [1], Mr Martin Checklin [3,4], Ms Nadine Lawson [5], Dr Freeman-Sanderson [6,7], Dr Alissa Burnett [2,8]
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Purpose: Evaluation of pharyngeal residue is an integral component to dysphagia assessment. During flexible endoscopic evaluation of swallowing (FEES), pharyngeal residue interpretation tools (PRITs) are often used to quantify residue. To understand the clinical utility of PRITs assessment of user-experience (UX) and user-needs, including use of normative data (ND) by their intended user is essential, but currently not well understood.

Methods: A 45-item, cross-sectional e-Survey exploring the concept of UX was distributed via snowball sampling using email/ social media platforms worldwide. Data were analysed descriptively.

Results: 196 FEES users from 18 countries, working across diverse clinical settings responded. Most respondents (75%; 117/153) used PRITs to rate residue on FEES. The majority were satisfied with the usability of PRITs, however 39% (28/72) indicated additional elements are needed within existing tools. Whilst 44%% (32/72) did not expect PRITs to have predictive value for swallow function, 84% (84/100) felt PRITs should be based on ND. A total of 90% (90/100) felt PRITs should assist patients to understand pharyngeal residue severity, 78% (78/100) preferred ordinal scales and 65% (65/100) preferred anatomically defined scales.

Conclusions: This research is the first to systematically explore UX, user-needs and ND for PRITs. It provides insights for researchers and PRIT developers for future efforts to increase the user-centredness of PRITs and respond to the needs and practice habits of their intended user. Analyses using a design sciences framework also highlights the value of UX research in understanding the clinical utility of PRITs.

Normative esophageal pill and capsule transit times for esophageal screening

Dr Georgia Mackay [1], Dr Anna Miles [1], Dr Jacqueline Allen [1]
[1] University of Auckland, Auckland, New Zealand

Purpose: Videofluoroscopic swallow study (VFSS) is a common instrumental assessment. Typically, liquid barium of varying viscosity is given, however the addition of a pill swallow may unmask esophageal abnormalities that contribute to pharyngolaryngeal symptoms.(1,2) Patients must swallow different shaped medications in daily life and therefore we compared esophageal transit times of oval capsules and round compressed powder pills.

Methodology: One hundred and forty-three healthy adult VFSS (age 20-98yrs) that including swallowing of either a round (n=87) or oval (n=56) pill were analysed. Esophageal Transit Time (ETT), maximum opening of the pharyngoesophageal segment (PESmax), pharyngeal constriction ratio (PCR) and total pharyngeal transit time (TPT) were recorded.

Results: Median ETT for all pills was 12.30s (range 1.5-60s); round pills 16.38s (range 1.04-60s), oval capsules 4.1s (range 0.33-60s) (U= 1482, p<.001). ETT pill was significantly associated with TPT and PCR but not age, gender or PESMax.

Conclusion: Medication esophageal transit times are affected by pill type in healthy adults. Oval capsules transit the esophagus more quickly than round compressed powder pills. Further research is needed in patient populations to identify if this pattern is also present in disease states. Pill shape should be chosen based on the clinical purpose. Pill shape should also be considered when prescribing medications in those with impaired swallows.

[1] Miles, McMillan, Ward, Allen. Esophageal Visualization as an Adjunct to the Videofluoroscopic Study of Swallowing. Otolaryngol Head Neck Surg. 2014;152(3):488-493.

[2] Allen, White, Leonard, Belafsky. Comparison of esophageal screen findings on videofluoroscopy with full esophagram results. Head Neck. 2012;34(2):264-269.

Abstracts (con'd)

Specialist multimodal speech pathology service for head and neck oncology patients with an altered airway: Implementation of proactive and preventative community-based care via telepractice

Ms Madlyn Connelly [1]
[1] *Monash Health, Melbourne, Australia*

Purpose: Patients with a tracheostomy or laryngectomy require specialist Speech Pathology care, accessed largely via metropolitan tertiary hospitals. The current, primarily medical model of care, highlights economic inefficiency, with patient's scheduled based on availability alongside ENT over clinical need. This contributes to overfilled clinics and inadequate capacity to focus on activity and participation in swallowing and communication. This project will design and evaluate a new multimodal model for the Monash Speech Pathology Department; aiming to improve patient satisfaction; and reduce readmissions through provision of a proactive, community-based services via telehealth.

Method: This is an 18 month, 3-phase quality improvement project. Phase 1: file audit and pre-pilot surveys and consultation, design of the pilot model. Phase 2: implementation of the model including education packages for regional stakeholders. Phase 3: audit of clinical data points and analysis to evaluate outcomes, informing a long-term, sustainable service.

Results: Formal consultation and surveying of patients and regional stakeholders in phase 1 about current satisfaction, barriers to service and service preferences found: 41% of patients reported travel related barriers to accessing speech pathology; patients and carers desired an increased focus on psychological wellbeing and valued a service that was flexible, with continuity between telehealth and on-site delivery modes. Based on these results, a pilot model of care was developed and will be presented.

Conclusion: This new model will provide a speech pathology service which is easier to access regardless of patient's geographical location with increased capacity to focus on holistic care.

Help! Is there a doctor in the house? Team member roles and practices when it comes to observing structural abnormalities on videofluoroscopy swallowing studies (VFSS)

Ms Claire Stanley [1,2], *A/Prof Anna Miles* [3], *A/Prof Debbie Phyland* [1,2]
[1] *Department of Otolaryngology, Head and Neck Surgery, Monash Health, Melbourne, Australia,* [2] *Department of Surgery, Nursing and Health Sciences, Monash University, Melbourne, Australia,* [3] *School of Psychology, Faculty of Science, University of Auckland, Auckland, New Zealand*

Purpose: With SP-led VFSS clinics becoming commonplace without a radiologist present, it is critical that SPs have access to medical specialists (radiologist or ENT), knowledge to ensure procedures provide adequate imaging and anatomical information to support diagnostics, and sufficient skills to determine when further diagnostic evaluation is needed.

Methodology: A 15-item online survey was distributed to Australian SPs currently performing VFSS with adults, via professional email forums. Survey questions explored contribution of VFSS team members to swallow interpretation, self-reported competence in identifying structural abnormalities and previous education and training to support this role.

Results: The survey was completed by 139 SPs: 80% (n=111) were from metropolitan hospitals, 93% (n= 129) from public services, with a mean of 9.22 (range; 1-35) years VFSS experience. No radiologist was reported as present during VFSS by 45% (n=61) of respondents, with 84% (n= 113/135) of them reporting they notify the radiologist when structural abnormalities required review. No formal SP training in structural abnormalities was reported by 36% (n=47/132), and 66% (n=92/132) responded no formal training on the images required for adequate off-line diagnostic evaluation by a radiologist. Further data analysis will compare Beginner and Experienced SP groups for differences.

Conclusion: Routine review of VFSS images by a radiologist is becoming less common. Most SP determine which patients would benefit from a medical specialist review of structural abnormalities and their self-reported competence increases with experience. Early-career SP training in identifying structural abnormalities for review by a medical specialist would ensure patients receive a comprehensive evaluation.

Abstracts (con'd)

They say I'm normal but I can't swallow! A case series detailing the diagnostic and treatment journey of 5 patients presenting to a private practice with functional dysphagia

Ms Therese Dodds [1]
[1] *Eastern Suburbs Speech Pathology, Darlinghurst, Australia,* [2] *St Vincent's Private Hospital, Darlinghurst, Australia,* [3] *The Voice Centre Australia, Darlinghurst, Australia*

Psychogenic dysphagia is a deglutition disorder characterised by a fear of swallowing, with no structural or functional causes (2). This disorder can also be termed phagophobia. Patients with complaints of dysphagia in the absence of an obvious organic cause often meet various healthcare professionals over lengthy periods of time on their path to a potential diagnosis. These patients can have clinically significant scores on stress and anxiety scales and the very process of arriving at a point of diagnosis and treatment for the psychogenic disorder can contribute to already high levels of stress and anxiety. Further to this, clear treatment protocols for the psychogenic dysphagic patient are not available (1). There is, however, growing evidence to suggest that multidisciplinary care by speech pathologists, laryngologists, gastroenterologists, psychologists, and others, with expertise in the area of psychogenic presentations can afford patients with opportunities for a timelier diagnosis, reduced symptom burden and ultimate recovery. This presentation will detail 5 cases referred to the author's private practice over a 12-month period for evaluation and treatment for psychogenic dysphagia/phagophobia. Clinical history, evaluation protocols, therapy approaches, and outcomes to date will be discussed.

References:
1. Baijens, L.W.J., Koetsenruijter, K., & Pilz, W. Diagnosis and Treatment of Phagophobia: A Review. Dysphagia (2013) 28:260–270
2. Shaker, R., Belafsky, P.C., Postma, G.N., & Easterling, C. Principles of Deglutition – A Multidisciplinary text for swallowing and its disorders. Springer New York, NY, 2012

What's new in recurrent respiratory papillomatosis

Fred Dikkers - IAP Invited Speaker

Introduction: HPV 6 and 11 are responsible for recurrent respiratory papillomatosis (RRP). What is considered by doctors to be "low risk" causes a lifetime of surgery and loss of a normal voice. Patients long for non-surgical treatment. Four new treatments will be discussed: therapeutic HPV vaccination, VEGF inhibition, DNA immunotherapy, and PD-L1 blockade.

Material and Method: Literature retrieved from reviews (HPV vaccine, bevacizumab) or unique articles (INO-3107, avelumab) will be highlighted.

Results: HPV vaccination may be a beneficial adjuvant treatment for RRP. VEGF inhibition with bevacizumab is an effective treatment option for severe RRP; a systemic administration might be the treatment of first choice. DNA immunotherapy with INO-3107 is tolerable and immunogenic and provides clinical benefits to adults with RRP. PD-L1 blockade with avelumab demonstrated safety and clinical activity in patients with laryngeal RRP.

Discussion: New developments in medical treatment are emerging. HPV vaccine is currently provided off-label. Bevacizumab is not administered in prospective studies with huge numbers. Effects of DNA immunotherapy and PD-L1 blockade have both just published in one phase II study. Altogether, this could lead to a paradigm shift in the treatment of RRP.

Conclusion: Four medical developments might lead to more medical treatment of RRP. Application worldwide differs per drug.

Abstracts (con'd)

Recurrent respiratory papillomatosis management in Australia

Dr Anthony Rotman [1], A/Prof Debbie Phyland [1], Dr Charles Giddings [1], A/Prof Paul Paddle [1]
[1] Monash Health, East Bentleigh, Australia

Purpose of study: To assess contemporary management of recurrent respiratory papillomatosis (RRP) in Australia.

Methods: A 40-question survey study was conducted over email, involving 507 members of the Australian Society of Otolaryngology Head & Neck Surgeons (ASOHNS). Questions related to medical and surgical RRP management, as well as prior surgical training.

Results: There was a 14.6% response rate (74/507 emails). 54.1% of respondents were from VIC/NSW with a mean of 10-19 years surgical experience. The majority were Head & Neck fellowship trained (29.7%), with 20.3% having completed a Laryngology fellowship. 84.9% saw less than 10 patients with RRP per year and 93.8% of respondents managed mainly adult-onset disease. Two-thirds of surgeons operated on less than 5 RRP cases per year and only 80% routinely recommended Human Papillomavirus vaccination to these patients. Most surgeons sometimes or never referred patients for voice therapy, with only 54.3% using stroboscopy for perioperative assessment. Overall, the preferred intraoperative airway was a microlaryngoscopy tube for high-volume disease (32.7%), whilst for low-volume disease a microlaryngoscopy tube and high-flow apnoeic oxygenation were equally preferred (30.6% each). Both in adult (43.2%) and paediatric (40.0%) cases, the microdebrider was the preferred instrument. 70.2% of surgeons used adjuvant therapy, typically intralesional bevacizumab 25mg/mL. Throughout their careers, respondents felt the HPV vaccine had the biggest impact on RRP.

Conclusion: The majority of Australian ENT surgeons caring for patients with RRP are head and neck fellowship trained and use the microdebrider. Most use adjuvant bevacizumab and recommended the HPV vaccine.

Keynote Lecture: Early glottic cancer

Taner Yilmaz - Keynote Speaker
Hacettepe University Faculty of Medicine, Department of Otolaryngology-Head & Neck Surgery, Ankara, Turkey

Early glottic cancer is defined as Tis, T1a-b, T2a-b. It can be treated by radiation therapy (RT) or transoral laryngeal microsurgery (TLM). TLM resects only involved structures, using narrow margins (>0.5 mm, >1 mm). It improves functional outcomes. Disease-free survival in 5-10-20 years is above 95%.

10-20% of patients develop local recurrence. Local control rate of TLM and RT is usually equal. However, overall survival and organ preservation of TLM is better than RT. Photoangiolysis using KTP laser utilizes ultranarrow margins; tumor is ablated, not resected en block; it offers better voice results with equal oncological outcome; it is based on that a minority (20%) of T1a lesions invade vocalis muscle and that 50% of lesions do not progress through SLP to invade vocal ligament.

TLM offers shorter hospitalization, lower complication, shorter treatment time, rapid recovery, superior functional outcomes compared to open partial laryngectomy and less damage to healthy tissue compared to RT. It leaves open all treatment options in patients with recurrent disease. TLM is more cost-effective than RT, preserves function (voice).

The limitations of TLM include: 1/3 of patients need 2 or more laser procedures. Laryngeal exposure may be impossible for some patients. Anterior commissure involvement, thyroid cartilage invasion and impaired vocal fold mobility due to posterior paraglottic space invasion are surgical challenges and worsen oncological and voice results. For T1b lesions, two-step procedure to prevent anterior webbing may be advocated.

Cordectomy type I through VI will be demonstrated with intraoperative pictures and videos.

Abstracts (con'd)

Effectiveness of voice training for trans women – The LUKIMON research collaboration: Behavioural gender affirming voice training for trans women who wish to use a female sounding voice

Ulrika Nygren [1,2], Georgia Dacakis [3], Jennifer Oates [3], Sterling Quinn [3], Maria Södersten [1,2]
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Purpose. LUKIMON is a research collaboration investigating outcomes of gender affirming voice training for trans women wanting to develop a female-sounding voice. The aim of this presentation is to describe the behavioral gender affirming voice training provided to trans women in the LUKIMON research project.

Voice Training Program. The voice training comprised 8-12, individual, 45-minute sessions scheduled once weekly. The training targeted aspects of voice that research has indicated contribute to listener perceptions of a speaker´s gender. In line with current best practice recommendations, a client centered approach was used, in which participants shared an overall goal of developing a feminine-sounding voice to use in their daily life, but goals were also addressed on an individual basis with training modified according to each participant's abilities and needs. The training also focused on helping participants achieve their goals while maintaining healthy, safe and efficient voice production.

Participant goals were targeted through education regarding voice production and care, as well as exercises for relaxation and breath support for voice production. Additionally, participants received training for elevating speaking pitch, increasing speaking pitch variation, and developing a more forward/bright vocal resonance.

Participant learning was supported using techniques and resources such as hierarchies of speaking situations, Apps/technology, practice logs and record forms, and early and deliberate focus on structured transfer beyond the clinic. Multiple handouts and reporting forms were provided to participants to facilitate the voice modification process.

This presentation will provide information regarding both the techniques and approaches used within the voice training, as well as the tools and resources developed by the research team to enhance training fidelity and support participant learning and transfer.

Investigating the outcomes of pitch raising surgery and peri-operative voice therapy

Dr Nicole Free [1,2], A/Prof Debbie Phyland [1,2], Prof Jennifer Oates [1,2,3], Dr Sterling Quinn [3], Mr Paul Paddle [1,4,5]
[1] Melbourne Voice Analysis Centre, East Melbourne, Australia, [2] Voice Medicine Australia, Australia, [3] Discipline of Speech Pathology, La Trobe University, Australia, [4] Department of Otolaryngology Head and Neck Surgery, Monash Health, Australia, [5] Department of Surgery, Faculty of Medicine, Nursing and Health Sciences, Monash University, Australia

Purpose: To investigate the outcomes of pitch raising surgery and peri operative voice therapy in a group of trans female and transfeminine patients.

Methodology: 42 trans female or transfeminine patients undergoing pitch raising surgery (vocal fold shortening and retrodisplacement of anterior commissure) and peri operative voice therapy were followed to explore outcomes of intervention in vocal function and voice-related quality of life. All patients were assessed by laryngeal videostroboscopy, and one or more of acoustic evaluation, auditory-perceptual evaluation, and the Trans Woman Voice Questionnaire (TWVQ) at pre-surgery baseline and at least three months post operatively. A self-report survey regarding overall perceptions of voice outcomes was also attained post operatively.

Results/Conclusion: Descriptive and inferential statistics to investigate voice outcomes assessed by acoustic parameters, auditory-perceptual evaluation and Trans Woman Voice Questionnaire (TWVQ) will be presented. Changes in vocal function and laryngeal structure and function will be presented including videostroboscopy videos and voice samples of specific speech tasks and factors that impacted change in perceptual, acoustic and self-reported outcomes will be discussed. Surgical complications, revision surgeries and clinical experience working with this population in peri operative therapy will be discussed with perspectives from a multidisciplinary team. In addition, client perspectives of the success of pitch raising surgery in achieving desired voice outcomes will be explored.

Abstracts (con'd)

Voice deepening surgery - (Relaxation LFS)
Nupur Kapoor Nerurkar - Keynote Speaker

Relaxation Laryngeal Framework Surgery was first described by Professor Nobuhiko Isshiki and was called the Type 3 Thyroplasty. The ELS has suggested "Relaxation Laryngoplasty" in its new nomenclature for this procedure.

One of the primary indications of this surgery is in puberphonia patients who do not respond to speech therapy. Since the pitch of voice is directly proportional to the tension in the vocal folds, relaxing the vocal folds achieves a drop in pitch.

This surgery which is technically simple and performed under local anaesthesia shall be discussed. An initial breathiness to the voice improves usually within a month.

A positive Gutzmann manoeuvre preoperatively is indicative of a good response to surgery. Though the result of this surgery is immediate and gratifying for the patient and surgeon, it should not be performed in patients who have not received and been compliant with long term speech therapy.

Occasionally it may be considered in the female to male trans-person who does not respond to testosterone and also in male patients with sulcus and a high pitch.

The value of harmonics-to-noise ratio and cepstral peak prominence of vowel in differentiating disordered from non-disordered voices
Dr Duy Duong Nguyen [1], A/Prof Daniel Novakovic [1], Dr Cate Madill [1]
[1] *The University of Sydney, Camperdown, Australia*

Aims: This study aimed to investigate the value of the harmonics-to-noise ratio (HNR), cepstral peak prominence (CPP) and its smoothed variant (CPPS) as single and combined measures in discriminating voice-disordered speakers from non-disordered speakers.

Method: Vowel /a/ samples were extracted and edited from 133 voice-disordered female patients and 97 non-voice disordered female participants. Praat software was used to measure HNR and CPPS and the Analysis of Dysphonia in Speech and Voice (ADSV) program was used to measure CPP. Discrimination values of these acoustic measures were tested using linear discriminant analysis, receiver operating characteristic (ROC) curve analysis, and logistic regression. Outcome measures included sensitivity, specificity, and accuracy of classification.

Results: As single acoustic measures, HNR showed low sensitivity, specificity, and classification accuracy. Vowel CPP showed significantly greater discrimination values than vowel CPPS. As combined acoustic measures, the highest discrimination values were achieved with either vowel CPP plus vowel CPPS (sensitivity = 98.5%; specificity = 86.6%, accuracy = 93.5%) or HNR plus vowel CPP and vowel CPPS (sensitivity = 98.4%; specificity = 85.6%, accuracy = 92.8%), followed by HNR plus vowel CPP (sensitivity = 94.4%, specificity = 88.7%, and accuracy = 91.9%). HNR combined with vowel CPPS resulted in low sensitivity (65.9%), specificity (69.1%), and accuracy (67.3%).

Conclusions: These findings support the use of vowel CPP as a single measure or combination of either vowel CPP plus vowel CPPS or HNR plus vowel CPP and vowel CPPS for differentiating disordered from non-disordered voices.

Abstracts (con'd)

Efficacy of sob voice therapy on vocal pitch and voice quality of MTF transgender speakers

A/Prof Cate Madill [1], Ms Antonia Chacon [1], A/Prof Daniel Novakovic [1], Dr Duy Duong Nguyen [1]
[1] The University of Sydney, Camperdown, Australia

Aims: This study aimed to examine the efficacy of the Sob Voice Therapy program (SVT) on some acoustic measures reflecting pitch and voice quality in transgender male-to-female (MTF) speakers.

Method: This was a retrospective data audit of 50 MTF speakers who were treated with SVT between 12/2014 and 12/2019. Treatment techniques included Optimal Phonation Task (OPT), Sob Voice Quality (SVQ) and two learning processes, being Sob Variant (SV) and negative practice (NP). Mean age of patients was 32.9 years (standard deviation, SD = 14.4; range = 15 to 65). Acoustic analysis programs Praat and Analysis of Dysphonia in Speech and Voice (ADSV) were used to analyse prolonged vowel /a/, the third CAPE-V phrase (CAPE-V3), and the Rainbow Passage (RP). Acoustic outcomes included fundamental frequency (F0), F0 standard deviation, harmonics-to-noise ratio (HNR), cepstral peak prominence (CPP and CPPS), and Cepstral/Spectral Index of Dysphonia (CSID). Data were statistically analysed using linear mixed model.

Results: Significant fixed effects were found for pitch: F0 of CAPE-V3 and RP significantly increased at SV compared with baseline. There were no significant treatment effects on F0SD. For voice quality measures, post-SV, there was no significant fixed effect of treatment on CPP and CSID of all vocal tasks (vowel, CAPE-V3, and RP). Post-OPT, there was significant effect of treatment on HNR (vowel) and CPPS (vowel, CAPE-V3, and RP).

Conclusions: The Sob Voice Therapy program was effective in increasing vocal pitch for the MTF transgender speakers. Only OPT showed significant treatment effects on voice quality of this cohort.

Effectiveness of voice training for trans women - The lukimon research collaboration

Dr Sterling Quinn [1,5], Emeritus Prof Jennifer Oates [1,4], Prof Maria Sodersten [2,3], Dr Georgia Dacakis [1], Dr Anders Sand [2], Dr Svante Granqvist [2], Ms Victoria Kelly [3], Ms Georgina Smith [1], Dr Ulrika Nygren [2,3]
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Purpose: LUKIMON is a research collaboration investigating outcomes of gender affirming voice training for trans women wanting to develop a female-sounding voice.

Methods: Seventy-four participants from Australia and Sweden completed 8-12 sessions of a voice training program in this prospective, repeated measures study. Data were collected at 4 times; 2 before training, 1 after training, and 1 at follow-up. Patient-reported data and naive listener ratings were designated as primary outcomes in line with the trans women's voice goals. Further, because direct targets of voice training are acoustic features such as fundamental frequency (fo), we examined acoustic outcomes and their associations with listener perceptions.

Results: Group-level statistical analyses demonstrated a positive effect on all primary outcomes (vocal satisfaction, perceptions of voice-related social participation, and self-listener-rated perceptions of voice). These improvements were maintained at follow-up 3 months after training. Individual-level analysis revealed that while all participants achieved positive outcomes, not every woman made gains sufficient to fully achieve their voice change goals. Similarly, at both group and individual levels, participants increased in average, minimum and maximum fo, formant frequency measures, sound pressure level (Leq), and the level difference between the first and second harmonics (LH1-LH2). The three acoustic variables that most strongly predicted listener ratings of a female-sounding voice were fo average, average formant frequency and Leq.

Conclusions: Our findings from this largest study ever reported on voice training for trans women provide new evidence that gender affirming voice training is effective and deserves increased prioritization within health care services.

Abstracts (con'd)

Use of voice activated virtual reality games in gender affirming voice training: A pilot feasibility study.

Miss Emily Valtcheva [1], Dr Cath Gregory [1], Dr Lucy Bryant [1]
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Gender affirming voice training (GAVT) aims to modify aspects of a client's voice and communication to best reflect their gender identity. Regular voice practice is often a challenge. Clients require a safe space and the motivation to regularly practice their voice techniques. Responding to those needs, and adapting to a changing technological world, this pilot study investigates the feasibility and safety of voice-controlled virtual reality games and applications in GAVT.

Methods: In a mixed methods case series, individuals with prior experience of GAVT were invited to engage in a virtual reality (VR) experience at the University of Technology Sydney. Participants played three different VR games controlled by their voice. Their voice was assessed at baseline, and after each application. Participants completed a short survey after each experience and a semi-structured interview reflecting on the experience overall.

Results: Four trans women participated in the study. All were able to successfully engage in the VR experiences. Results showed increased mean pitch and improved vocal clarity of a reading passage after two out of three of the VR games, compared to baseline. Participants reported enjoying some of the VR experiences and were enthusiastic about the potential for more specifically designed applications to significantly improve their voice practice.

Conclusion: General improvements in vocal pitch and clarity suggest that VR applications are feasible for gender affirming voice training. VR applications were popular amongst participants. Further study is warranted to assess effectiveness of clinical application and further co-design of a specifically designed application is warranted.

SponTaneous respiration using IntraVEnous anaesthesia and high-flow nasal oxygen (STRIVE Hi) for adult laryngoscopy

Dr Michael Lee [1], Dr Seraphina Key [2], Dr Caroline Jackson [1], Dr Benedict Krupowicz [1], Dr Drew Heffernan [3], Dr Georgina Harris [1,3]
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Introduction: The use of tubeless ventilation via high-flow nasal oxygen is well established for use in paediatric airway surgery and there is increasing evidence supporting SponTaneous Respiration using IntraVEnous anaesthesia and High-flow nasal oxygen (STRIVE Hi) for adult patients. This study aims to present a single surgeon, multicentre experience on the use of STRIVE Hi and a systematic review of the safety of the technique for laryngeal and airway surgery.

Methods: A literature review was performed through PubMed/MEDLINE, CENTRAL, SCOPUS, Web of Science and CINAHL databases and registered prospectively in PROSPERO. A retrospective review was conducted of patients we encountered at our institutions between 2018 and 2023.

Results: 9 studies met inclusion criteria, reporting on the use of STRIVE Hi in adult airway surgery under general anaesthesia.

Included patients underwent suspension microlaryngoscopy for benign and malignant pathologies. Data was collected by two independent reviewers on the prevalence of relevant comorbidities (obstructive sleep apnoea (OSA), obesity, subglottic stenosis), duration and type of surgery.

Of the 142 patients, 6 cases required transient endotracheal ventilation and 2 cases were converted to alternative ventilation. Subgroup analysis did not find any comorbidities, duration or type of surgery to be significantly associated with failure of STRIVE Hi.

Conclusion: The literature supports STRIVE Hi to be a safe technique for use in adult laryngeal surgery. OSA, obesity, subglottic stenosis and duration of surgery were not contraindications to STRIVE Hi. These findings were similarly supported in our retrospective review.

Abstracts (con'd)

Contemporary management of post-intubation phonatory insufficiency

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Introduction: Post-Intubation Phonatory Insufficiency (PIPI) due to erosive change or scarring of the arytenoid cartilage because of prolonged intubation can result in dysphonia. Conventional management techniques include open thyroplasty with adduction arytenopexy, the use of rotational and local advancement flaps and injection augmentation of the defects, but phonatory improvement is often limited. This study seeks to review the efficacy of existing treatments for PIPI and detail our experience with an emerging technique using an endoscopic re-approximation suture.

Methods: A literature review was performed through PubMed/MEDLINE, CENTRAL, SCOPUS, Web of Science and CINAHL databases and registered prospectively in PROSPERO.

Results: 14 studies met inclusion criteria, reporting on the use of open and endoscopic techniques for management of PIPI. There were no reliable means to consistently restore cartilaginous defects in the respiratory glottis.

Lang et al. explore a minimally invasive endoscopic technique for re-approximating discontinuity between the vocal process and vocal ligament with promising phonatory improvement. We report on a single case at our institution of phonatory improvement in a 31 year old female with PIPI following a similar procedure.

Conclusion: PIPI due to prolonged intubation remains a difficult condition to treat, with existing techniques limited by poor phonatory outcomes. The use of endoscopic re-approximation suturing is a promising emerging technique with good phonatory outcomes, though current data remains limited. Further studies in comparison to existing techniques could aid in validating this technique for treatment of PIPI.

Comparison of angiolytic effects between the 445-nm blue laser and the 532-nm pulsed potassium-titanyl-phosphate (KTP) laser

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Aims: This study aimed to compare the selective absorption of the 445-nm Blue laser (BL) and the 532-nm KTP laser by blood vessels and explore the utility of BL in angiolytic application.

Methods: Sixty-three chicken eggs at day 14 of the incubation period were dissected to expose the chick chorioallantoic membrane (CAM) from which the third-order vessels were identified. Vascular segments were irradiated using BL and KTP lasers at a laser-to-vessel distance of 3 millimetres (mm) using 0.4-mm fibre size, one pulse per second. Pulse width (PW) and energy levels were varied systematically. Outcome measures included ablation rate (AR) and rupture rate (RR), which were compared between the two lasers at the same PW and energy settings.

Results: At long PW above 100 milliseconds (ms) and high (600 millijoules, mJ) or low (400mJ) energy levels per pulse, BL performed significantly better than KTP. The two lasers showed equivalent performance across medium (500mJ) to medium-low (450mJ) energy settings. At medium PW (50 to 60 ms), both laser types showed similar angiolytic effects at high, medium, and medium-low energy levels, in which both lasers were effective in ablating blood vessels of the CAM. At lower energy ranges (450mJ), KTP showed significantly higher AR than BL.

Conclusion: These findings demonstrated that BL and KTP lasers were equivalent in ablating blood vessels across a wide PW and energy settings. BL appeared to show more advantages over KTP at long PW.

Abstracts (con'd)

Treatment decisions for phonotraumatic lesions - A large retrospective case - Series review

A/Prof Debbie Phyland [1,2,3,4], Dr Nicole Free [1,2], Ms Karina Sundjaja [4], Mr Dan Cokis [4], Dr Paul Paddle [1,3], Dr Elaina Kefalianos [4]

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Purpose: To explore the relevance of patient, voice and lesion characteristics in determining treatment choice for patients diagnosed with phonotraumatic vocal fold lesions PVL at a mutidisciplinary voice clinic.

Background: Decisions whether to undertake voice therapy, medical intervention or surgery as the primary choice, for people with voice disorders associated with PVFLs, are predicated on a multitude of factors. These may include the nature (e.g. size, type, pliability, age/evolution stage and severity) of the lesion, voice impairment and/or the impact on activity and participation, clinician preference and also patient factors. Clinical judgment of a patient's candidature is therefore not an exact process and there are no clear guidelines to assist such decisions.

Method: A retrospective single case study design was undertaken involving a large audit of patients (n=700) diagnosed with PVFLs over the past fifteen years at a multidisciplinary clinic. Data collected, related to patient demographic and voice-use characteristics (age, gender, occupational voice-use category, estimated vocal load category) and diagnosed PVFL category and lesion characteristics, will be explored with regard to the first and the final choice of intervention.

Results: Data analysis identified patterns related to key factors involved with clinical decision-making of best treatment options for PVFLs. On the basis of these historical results, an algorithm is proposed to aid clients make a more informed and pragmatic treatment choice in management of their phonotraumatic lesion/s.

References:
White A. Management of benign vocal fold lesions: current perspectives on the role for voice therapy. Current opinion in OHNS. 2019 Jun 1;27(3):185-90.

A retrospective audit of intervention outcomes for phonotraumatic lesions

A/Prof Debbie Phyland [1,2,3,4], Dr Nicole Free [1,3], Ms Tahnee Dalton [2], Ms Jing Yen Ting [2], Ms Lois Meier [2], Ms Brianagh Curran [2], Dr Elaina Kefalanios [2]

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Purpose: To investigate intervention outcomes in patients diagnosed with phonotraumatic vocal fold lesions (PVFL) from a multidisciplinary clinic large dataset.

Background & rationale: PVFLs vary in physical characteristics (size, type, pliability, evolutional stage), in severity and nature of impact on function and in best-practice treatment options. Intervention success can therefore be measured from multiple perspectives including perceptual and instrumental assessment of lesion resolution and improvement in dysphonia; lesion and/or dysphonia recurrence; patient-report global satisfaction, impairment and QoL scales; and return to pre-disorder occupational voicing. The multidimensional nature therefore provides a challenge for outcome measurement and differences in methodology limit the potential for cross-study comparisons regarding treatment effectiveness. There is a need for large datasets to better inform key factors in determining outcome.

Method: A retrospective case study design was undertaken to audit the records of people (n=700) treated with PVFLs over the past fifteen years at a multidisciplinary voice clinic. Data collected included demographic and voice-use, diagnosed PVFL lesion characteristics and primary intervention (voice therapy only vs surgery + voice therapy; nature of intervention) and formal/ informal outcome measures.

Outcome: Data analysis revealed the complexity of outcome measurement but did identify lesion type and certain patient factors were useful predictors of outcome in this sample and in particular which patients are more likely to succeed with voice therapy versus surgery.

Naunheim, M. R., & Carroll, T. L. (2017). Benign vocal fold lesions: update on nomenclature, cause, diagnosis, and treatment. Current opinion in otolaryngology & head and neck surgery, 25(6), 453-458.

Abstracts (con'd)

When the story tells the picture: Lesions among professional music theatre singers (PMTS) since COVID times

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9:15am - 9:25am

Objectives: To explore the recent voice concerns of PMTP seen by a SP with/without ENT comparative to pre-COVID experiences.

Background: PMTS manage fluctuations in vocal health regularly, trying self-help remedies when vocally under par, often performing with cumulative fatigue as they are fully committed to the 'show must go on' edict. Research suggests medical help is rarely sought until the issue is problematic and high prevalence rates of phonotraumatic lesion in this population are mostly derived from treatment-seeking samples only. Whether delayed clinical presentation of voice disorders increases the likelihood of lesion recalcitrance and whether these could have been averted with earlier expert management is unclear.

Method: Vocal health data related to PMTS and collected from both A) the speech pathology (SP) residency vocal risk management programme (VRMP) adopted by a sample of ten recent Australian professional music theatre productions (PMTS=243) and B) a multidisciplinary voice clinic was explored. The findings prior to and since COVID will be compared (frequency and nature of voice concerns, impact on ability to perform, frequency of ENT examinations, phonosurgery and other vocal health interventions).

Results: PMTS were more likely to have delayed clinical presentation, have established lesions, and to require surgery if no VRMP provided. Also, there was an increased prevalence of inflammatory lesions comparative to prior COVID years.

Conclusion: The value of a preventative approach for minimising vocal injury risk and of measuring PMTS self-reported vocal function has been highlighted. Recommendations are made for increased awareness of early injury detection and multidisciplinary management.

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