

Prince of Wales Otolaryngology Head and Neck Research Group

Annual Report 2017

Prince of Wales ORL Head and Neck Research Group



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Prince of Wales Otolaryngology Head and Neck Research Group

First (2017) Annual Report

Prince of Wales ORL Head and Neck Research Group

The Prince of Wales ORL Head and Neck Research Group was formed in February 2017 and comprises a heterogeneous group interested in participating, promoting and partaking in research in the area of Otolaryngology and Head and Neck Surgery.

The group is comprised of Otolaryngologists, Radiotherapists, Nurses, Clinical Nurse Consultants, and Allied Health Professionals, including Speech Therapists, Dietitians and Nutritionists, Registrars, Residents and Medical Students.

Meetings are held monthly in an informal setting aimed at promoting a helpful and safe environment in which to discuss ideas pertaining to research in the area of Otolaryngology and Head and Neck Surgery.

This first report will outline what has been achieved in the inaugural year.

The group is chaired by Professor Tom Havas, and key group members are;

- Dr I Jacobson
- Dr S Choroomi
- Dr C Meller
- Dr A Mohammadi
- Dr R Reddy
- Dr R Singh
- Dr T Holmes
- Dr B Cumming
- C Dow
- Dr L O'Connor
- Dr C Banks
- Dr J Lee
- Dr M Giles
- R Robinson and M Barnhart from the Department of Speech Therapy.
- P Gunner, the Clinical Nurse Consultant in Otolaryngology Head and Neck Surgery
- Dr Shein



- Dr Sideris

A number of projects have been undertaken in this inaugural year including, across a broad range of subjects. These have been both basic science in nature and clinical reviews. The breadth and quality of projects is demonstrated by several studies being accepted at ASOHNs 2018 Conference.

The current studies that have been accepted for publication include

PET Scan Study (Havas/ Mohammadi)

Superior Semi-Circular Canal Dehiscence Project: (Kertesz/ Shein

Paediatric Neck Masses (Jacobson)

Synovial Sarcoma of the Larynx (Dr Jacobson and Dr Shein).

Paediatric post-septal cellulitis – presented by Dr Shein at a meeting in Rome.

Laryngeal manifestation of focal dermal hypoplasia (Goltz Syndrome) and its surgical management (Dr Jacobson and Dr Shein).

We have a medical student conducting her thesis.

Medical Student thesis project (ILP Project)

- Ethics approval for this project has been received.
- Cassie Dow is our first ILP student who will be undertaking this under the supervision of Dr S Choroomi and Prof T Havas.
- Looking at control of bleeding during endonasal sinus surgery using topical application of adrenaline in two strengths.

Studies that are currently being written and pursued by members:

Glossectomy Project: (O'Connor/Robinson/Barnhart)

This is a statistical analysis of partial/ total glossectomy undertaken at the Prince of Wales Hospital.

- This study was done together with Radiation Oncology and Speech Therapy.
- The aim of this study was to identify the functional and psychological deficits associated with this surgery and to look at improving reconstructive techniques.



- An abstract of this work has been sent to the Australian Society of Otolaryngology Head and Neck surgery for a presentation at the 2018 meeting.
- A manuscript is being prepared for publication, with Dr L O'Connor as the primary author.

Orbital Extenteration Case series (Havas/Cumming)

- We are reviewing all orbital extenterations done at the Prince of Wales over the last 12 years.
- 40 patients have been identified over the 12-year period.
- Data collection is almost completed.
- Dr Wilcsek and Dr Martin from the Department of Occuloplastic Surgery will be involved in the study.
- Patients will be contacted for quality of life surveys apropos the operation, its reconstruction and the impact on their quality of life.

Tracheotomy Multi-Disciplinary Team (Holmes/Gunner/Havas/Jacobson)

- Prince of Wales has had a multi-disciplinary approach to management of tracheotomy care since 2011.
- A study is being undertaken by Dr T Holmes together with Paula Gunner, our clinical nurse consultant, to look at the objective benefits from this team approach in terms of; bed day-stay occupancy profile, prevention of complication, and impact on early discharge.
- Complicated spinal and neurosurgical patients have been excluded from this study due to their extended admissions, which are not related to their tracheotomy care.

Acinic Cell Carcinoma Project: (Jacobson/Sideris)

- This is a multi-unit study in conjunction with the Department of Otolaryngology Head and Neck Surgery at St Vincent's Hospital.
- The principle investigator on the Prince of Wales Campus is Dr I Jacobson, aided by Dr A Sideris, and at St Vincent's Dr R Gallagher.
- It is looking at the incidence of Acinic Cell Carcinoma in adults and children, our approach to their management, and their long-term survival figures.
- An abstract on this data has been submitted for publication and for the Australia Society of Otolaryngology Head and Neck Surgery meeting in 2018.



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Adult Epiglottitis Systemic Review (Havas/Sideris)

- PRISMA-P Method for search strategy was suggested by UNSW Library.
- Significant data has been extracted by Dr A Sideris.
- An abstract has been submitted for an oral presentation, or poster presentation, at the Australia Society of Otolaryngology Head and Neck Surgery meeting in 2018.



Allied Health Involvement

We are very fortunate to have a multidisciplinary approach to our research with our allied health colleagues from **speech pathology** contributing to our group and research:

Completed projects:

1. 'Total Laryngectomy and Functional Outcomes: A Comparison of Salvage Laryngectomy vs Primary Laryngectomy with Adjuvant Radiation Therapy' published in Head and Neck
2. Treatment toxicities and their impact on oral intake following non-surgical management for head and neck cancer: A 3 year longitudinal study' published in Supportive Care in Cancer

Presentations:

At the Australian and New Zealand Head and Neck Cancer Society 19th Annual Scientific Meeting (Oct 2017 Brisbane)

1. Total Laryngectomy and functional outcomes: a comparison of salvage laryngectomy vs primary laryngectomy with adjuvant radiation therapy'
2. "Peg vs No Peg for chemoradiation therapy patients with oropharyngeal SCC"
3. 'Content analysis of rehabilitation goals for patients following non-surgical HNC treatment'
4. 'Treatment toxicities and their impact on oral intake following non-surgical management for head and neck cancer: A 3 year longitudinal study'

Currently completing:

- Content Analysis of Rehabilitation Goals of Patients following Non-surgical Head and Neck Cancer Treatment
- Liaising with the lead author of the Glossectomy project



Biomedical Engineering collaboration:

We are pursuing novel techniques in biomedical engineering and collaborating with both Sydney University Biomedical Engineering Department and UNSW Biomedical Engineering department.

PhD

Professor Havas is joint supervisor for a Biomedical engineering student at the University of Sydney, pursuing nasal cartilage templating and in vitro growth, with the ultimate aim for use in complex nasal reconstruction. This is a first for a Department of ORL H& N Surgery and marks the beginning of a new direction with regards to close collaboration between Clinicians and Biomedical engineers to pioneer new treatment modalities. .

Masters

Our first successful Masters Thesis has been submitted, through Biomedical Engineering at Sydney University. This was based on precision imaging, templating and three-dimensional laser printing of nasal modeling in Rhinoplasty and Functional Nasal Reconstruction with Professor Havas as co-supervisor.

Title; Rapid Templating Nasal Cartilage Scaffolds and Determining Potential for Rhinoplasty

Research Fellow

The current Research Fellow will be working with the Department of Biomedical Engineering at UNSW in the area of three-dimensional laser printed alloplasts for functional jaw reconstruction after cancer surgery with Professor Havas as supervisor.

Masters

Dr Sideris will be working with the Department of Biomedical Engineering at UNSW in the area of drug impregnated absorbable meshes for use after surgical procedures, with Professor Havas as co-supervisor.

Negotiations are taking place to offer an annual internship to a Biomedical Engineering graduate from UNSW to foster further integration and cooperation within the two disciplines.

PhD and Masters

Our major new Biomedical project for 2018 is in the area of cross facial reanimation following iatrogenic facial nerve injury, senior collaborations are occurring between Dr Meller and Professor Havas



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Future Direction

Data (Jacobson)

In terms of future directions, a lot of work has been put to the development for a custom built database that will collect and analyse prospective pre-operative, intra-operative, and post-operative clinical data on all patients coming through the Department of Otolaryngology Head and Neck Surgery at the Prince of Wales Hospital. It is intended that this database will be deployed later this year, and will provide infrastructure to generate future research questions and ideas.

Dr J Lee, who is currently undertaking a fellowship in Cambridge, is doing a lot of the work in the development of the database.

HPV Study (Jacobson)

Dr Jacobson will be leading a study on “ The prevalence of HPV virus contamination of to sills in the Paediatric and preadolescent population “

We are aiming to develop international collaborations with institutions in North America (Harvard) and the United Kingdom (Cambridge) to garner momentum for participation in multi-site research.

A lot of the collaborative work with regards to optimal delivery of rhino pharmacology has been done in conjunction with Dr C Banks, who is undertaking post-fellowship training at Harvard University in Massachusetts (**Havas**).



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Final Remarks

We are very grateful for the support of the Department of Surgery at Prince of Wales Hospital and the University of New South Wales Medical School, and are pleased with the appointment of our first dedicated Independent Learning Project Undergraduate Student for 2018, Ms. Cassie Dow.

We look forward to greater achievements for the POW ORL Head and Neck Research Group in the year ahead, and we will be interfacing specifically with Professor Robert Smee to try to get his active participation. We are aiming to integrate the Nelune Cancer Centre and the Department of Radiotherapy with the research group allowing for closer cooperation.

We invite interested readers of this report to contact us to gain further information about any aspect of our work or to attend any of our monthly meetings.