Surgical News
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The Winter issue of Post Op inside!

Expanding research
Another Successful Scholar
A clearer picture

A Foundation for Surgery Scholarship has helped this Trainee update language in her field. 

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NT Trainee Dr Alice Guidera has used the funds attached to a 2012 Foundation for Surgery Scholarship to develop a detailed understanding of the anatomical arrangement of cervical fascia and clarify the anatomy of the parapharyngeal compartment (PPC).

Dr Guidera said that while an accurate understanding of the PPC and cervical fascia were essential for differentiating parapharyngeal compartment (PPC), fascia and clarifying the anatomy of the cervical fascia and its compartments, are sound,” she said. “They are based on thorough research of previous descriptions and our own experience, and we have used terminology that we know is useful in clinical practice.”

As part of her research, Dr Guidera conducted anatomical investigations of the anatomy of the PPC using dissection, serial histological sections and magnetic resonance imaging of cadaver specimens.

“A lot of previous studies had looked at very specific areas of the PPC in isolation or only employed one investigative technique and then extrapolated their findings to the whole area,” she said.

“This approach has limits so we tried to use several different techniques to get a better three-dimensional grasp of the fascial arrangement.

“My research was informed by newer technologies that are approaching the PPC in a way that has not been extensively described, so the aim of my work was to clearly describe reliable landmarks found in the anatomy of the region so that in complex procedures, surgeons can have secure reference points that will help with reliable and safe surgical approaches.

“The three-dimensional anatomy of the PPC is complex. It is a deep compartment that is difficult to access and one that is not oriented along traditional imaging planes.

“The study has clarified the borders, communicating contents and contents of the PPC which should help to optimise minimally-invasive surgical approaches, intraoperative orientation within the compartment, and reduce the risk of inadvertent damage to regional neurovascular structures.”

Working through the Departments of Surgical Sciences and Anatomy, Dr Guidera was supervised by Associate Professor of Otolaryngology Patrick Dawes and Professor of Anatomy Mark Stringer.

Now back as a SET 4 Trainee working at Christchurch Hospital, Dr Guidera said the support of the College had been critical in allowing her to undertake the research. “Having the luxury of having a whole year to really get to the bottom of a problem was invaluable,” she said.

“To read around the issue in depth, have stimulating discussions with my supervisors in a world class anatomy department and be able to dissect and investigate the anatomy for myself was extremely rewarding and I would recommend this type of research to any surgeon.

“Clinical practice requires total concentration and commitment and it would have been very difficult to switch between research and clinical work. Without the support of the RACS I probably wouldn’t have been able to undertake this research.”

The Foundation for Surgery Scholarship provided to Dr Guidera came with a $55,000 stipend of which 25 per cent was contributed by the Department of Surgical Sciences of the Dunedin School of Medicine.

With Karen Murphy

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Publications

Oral presentations

2013 - Dawes P .J.D. Head and Neck Fascia: No Space for Spaces. 82nd Annual Scientific Congress of the RACS, Auckland, New Zealand. 5-10 May 2013
2013 - Guidera A.K. Surgical Anatomy of the Parapharyngeal Compartment. Accepted for free paper presentation. 66th Annual General and Scientific Meeting of NZOHNS, Ruapehu, NZ. August 2013

With Karen Murphy