Digestive Disease Week:
Washington DC, May 20th-25th, 2007

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Tori is a fourth year medical student studying in Wellington, who especially enjoys public health. In this issue she shows us just how far a Summer Research Studentship can take you.

It's the winter of 2005 in Dunedin, New Zealand. A medical student stops before the notice-board of the medical library, prolonging the time till the slap of icy cold meets her at the exit. The notice-board is a hustled, vibrant market of notices calling out their wares. One inconspicuous advertisement speaks directly to the girl: "Do you need a summer job? Try a summer research studentship –a chance to earn money over summer whilst carrying out exciting research." Intrigued, or just procrastinating further, the girl leans closer, and ponders the small print. Cogs tick; neurons fire. . .then, thought bubble: "I need summer work. I'm sick to death of the supermarket! Research sounds like it could be interesting. But, I'm not sure, is it really going to get me anywhere. . . ?"

When I took on my first summer research studentship at the end of 2005, I never dreamed it could send me on international travel. However, in May 2007 it took me all the way to Washington DC, capital city of the United States of America. From May 20th-25th, this breeding ground of American patriotism was the home of Digestive Disease Week (DDW), where more than 16,000 researchers and physicians from around the world convene to share the latest exciting research on everything to do with the gut. I was to present a poster of my summer research, which looked at the outcomes of a surveillance programme for Barrett's Oesophagus.

Me, bike and the Golden Gate Bridge, San Francisco

My research

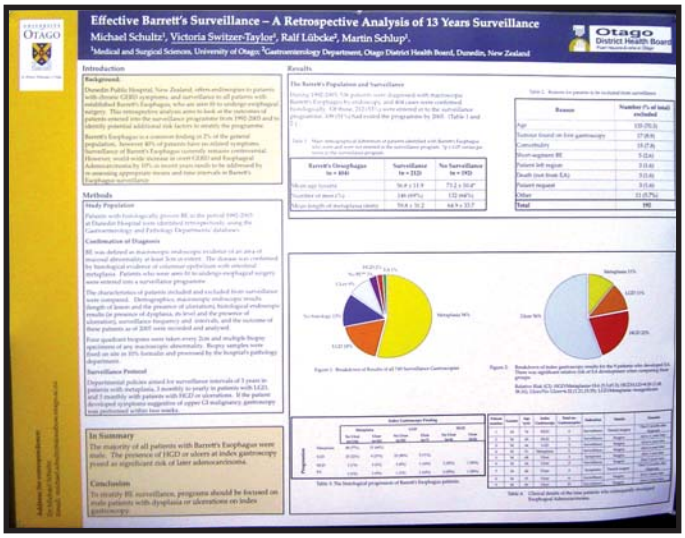
Barrett's oesophagus is when the squamous cells of the oesophagus are replaced by columnar epithelium with intestinal metaplasia[1], and is believed to be a result of GORD (gastro-oesophageal reflux disease), a very common disorder[2]. It is observable on upper endoscopy, which is when a tube is inserted down the patient's oesophagus and a camera used to look around. Barrett's is found in approximately two percent of the population[3], so is quite common, but its significance lies in its potential to progress to adenocarcinoma. The risk of progression is very low, approximately 0.5-1.0% per year of having the lesion[1]. However, the incidence of this cancer is increasing rapidly, and it carries a very poor prognosis, with a 5 year survival of 13%[4]. A ray of sunshine appears in this gloomy outlook however, when you consider that this survival is improved, the earlier the cancer is detected[5]. As Barrett's is a detectable lesion at the start of a cascade towards cancer, finding patients with Barrett's and surveying them regularly seems intuitive. This intuitive response has been shared by the rest of the world, with surveillance of Barrett's oesophagus patients being the international status quo.

However, Barrett's surveillance is very controversial at the moment. As there are a lot of people with Barrett's, and very few of these cases progress to malignancy, it has been described as "searching for a needle in a haystack"[6]. My research project analysed thirteen years of Barrett's Surveillance at Dunedin hospital and assessed its outcomes, including identifying risk factors in Barrett's patients that made them more likely to progress to cancer, to try and "cut down the haystack". These factors included being male or showing ulceration or high grade dysplasia on the very first endoscopy.

Digestive Disease Week

I presented these results in a poster on the first day of DDW. The poster was on show throughout the day and I had to be present at it for two hours to answer questions. What was it like? My sweaty palms and palpitations prior to this experience were uncalled for; in fact it was really valuable. Many people with expertise in the field looked at the work and gave me extensive feedback. I met other researchers who had done similar studies elsewhere in the world, and we compared results.

Aside from learning more about my own research project, the conference as a whole was a fantastic learning experience. The sheer size was overwhelming, and even if I cloned myself ten times over I couldn't have seen everything the DDW had to offer. It ran from 6.30am to 5.00pm for four consecutive days, and during that time attendees could view posters, go to a presentation on anything and everything gastrointestinal, encompassing both basic and clinical sciences, go to a learning centre where you could get some 'hands on' endoscopy practice with models, or visit the exhibition floor.



Some interesting facts I found out:

- The number of microbes in our gut number ten times that of our own human cells. These microbes may play more of an important role than we previously anticipated. One trial gave lean, microbe-free mice either microbes from obese mice, or microbes from lean mice. They were then fed the same things and treated identically in all ways other than the microbes in their gut. The mice with the microbes originating from obese mice gained double the amount of weight![6]
- In 1993, the National Polyp Study found that colorectal polyp removal decreased the incidence of colorectal cancer significantly. At DDW 2007 they released data showing this procedure also decreased colorectal cancer mortality by up to 92%![7]
- In the future, Barrett's surveillance may be replaced by an aspirin therapy![8]

Beyond the excitements of digestive disease, the conference was an eye-opening experience with regards to medical research and education. There was a real sense of drive and edge about the research, with considerable competition and extensive analysis. It was both exciting and intimidating. The evenings and lunchtimes were a stark contrast however, where people from all over the world could relax together and try not to talk about guts over dinner!

One aspect of the conference which really surprised my naive eyes was the involvement of the pharmaceutical industry. They and their loud brand names sponsored backpacks, free soft drinks, internet kiosks and buses. On the ground floor, an entire exhibition floor was filled with drug and equipment companies promoting their products via freebies. These ranged from Metamusal smoothies, memory sticks and blankets, to somebody sitting you in a lazy boy and telling you about their product while you had your feet massaged! The pervasive nature of this advertising shocked me and I struggled to resist the giveaways. Although I could understand the drug companies have a massive investment in their product, with some $1.4 billion being invested in a drug before it gets to the market, I couldn't help but notice the absence of both evidence and the patients from this bribery. Everybody who did accept freebies seemed to think they were immune to the drug companies' message, but if everybody was immune, why were these clever multi-million dollar companies marketing at all?

Leaving the colour, vibration and laxative smoothies of the exhibition floor, I was reassured: the research presented upstairs was very well critiqued and all speakers had to disclose any commercial biases they had before their talk commenced.

By the end of the week, I felt overwhelmed and inspired, and very grateful for the experience. I would like to thank my supervisor, Dr Michael Schultz, who supported me both in getting to the conference and throughtout the week. I must also extend my gratitude to both the Faculty and School of Medicine, in Dunedin, who funded my trip.

Finally, to all med students out there, standing in front of that noticeboard, contemplating a summer research studentship... Research is a massive, exciting, exploring ship, and you never know what new world you'll discover or where you'll pass along the way. A summer studentship is a great way to get on board!

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Pharmaceutical advertising was varied and creative! Diseases outside the convention centre

The Washington Monument