

Letter from America

Orbit and oculoplastic fellowship, University of California, San Diego

BY RL SCAWN

I was the fortunate recipient of the 2012 Keeler Scholarship, granting me the incredible opportunity to undertake a fellowship at the University of California, San Diego (UCSD) in orbital, oculoplastic and reconstructive surgery. My fellowship mentors were the renowned Professor Don Kikkawa, current President of the American Society of Oculoplastic and Reconstructive surgeons (ASOPRS), and the dynamic Associate Professor, Bobby Korn. The fellowship was centred at Shiley Eye Centre located on the vast UCSD campus in the beautiful beach town of La Jolla, 'the jewel' in Spanish. With the warm sun shining pretty much every day, and the Pacific Ocean just minutes away, I was very happy to be inside the hospital from morning to night!

The fellowship had been two years in the planning, involving interviews and several trips to San Diego, so I was eager to get started. I arrived in August 2012 to a warm welcome and much good-natured teasing regarding my English accent, and the differences in the vocabulary of our two great nations. The US presidential election was heating up with 'Obamacare' and socialised medicine debates were a polarising backdrop at the time. Patients were very welcoming and frequently keen to chat about their positive experiences in the UK, our Royal family and most importantly our hot current export, *Downton Abbey*.

The orbit and oculoplastic service consisted of two consultants (termed attendings in the US), one American ASOPRS oculoplastic fellow, a resident who rotated every three months, one or two research fellows and myself, the international fellow. The service was very busy. There was no scheduled study sessions, rest periods or European working time directive. On explaining these foreign concepts to the Americans, "isn't that what weekends are for?" was the amusingly candid, and in my opinion,



Putting my Keeler loupes to good use.

fair, response! That set the tone for a fulsome fellowship with the old adage 'the more you put in, the more you get out'.

An average week

Typically, we would spend three to four days a week operating and one to two days in clinic. The clinics averaged around 80-90 patients per day for two trainees and a consultant. I was impressed by the efficiency for such a high volume of patients. The clinic consisted of eight examination rooms. Patients were first brought into a room and their medical history and vision recorded. At any one time there were usually five patients ready for review with numbers outside each door to indicate the patient order. The trainees would record our clinical findings, suggest a management plan and take photographs, then the consultant would review every patient. At the end of clinic we would retire to the research office, grab a cup of tea and review the photographs of every patient, approximately 500 photographs per clinic. Two large flat

screen monitors allowed comparison of pre and postoperative images. The management plan or surgical outcome was discussed and evaluated for each patient. This highly educational interactive process would take around two hours with each case a teaching opportunity. Feedback also included our photographic skills, which were critiqued and polished so that my tilted, smiling, fluorescein tainted pictures were quickly a thing of the past. An important lesson for any future presentations.

Three dedicated ophthalmic operating theatres served the department. Surgery would start at 7.30am with the theatre sister gently marshalling the troops to ensure a prompt start. The orbit and oculoplastic service would usually consist of 7-10 cases per day, ideal fellowship training when you end the week 25 cases richer. It is typically cataract surgery that is associated with high surgical volume, but this was also high quality, orbit and oculoplastic surgery. The turnaround time was particularly swift at UCSD. The operative lists were all day affairs with no formal lunch break, which maximised operative time and flexibility. A new single floor, purpose built theatre suite, with pre-op and recovery designed to flow into one another, ensured seamless transit between each phase of a patient's care.

Thyroid eye disease

The clinical case mix was extremely varied and extensively functional, contrary to what many friends and colleagues believed would be a cosmetic focused fellowship. Thyroid eye disease (TED) was a big portion of the practice. UCSD had established a reputation within the US for TED management, pioneering a multidisciplinary clinic. Patients were seen at the same appointment by oculoplastic, strabismus and neuro-ophthalmology consultants. This

approach of combined coordinating care was also very effective for patient education and helped convey the staged nature of thyroid eye disease management reconstruction: orbital surgery followed by strabismus and finally eyelid surgery. The crossover of sub-specialities was great for the trainees. We were expected to do our own orthoptics, so initially I had to dig deep to resurrect my prism bar skills. The trainees would present each patient and their imaging to the consultants in each subspeciality, followed by a gentle grilling and teaching.

Thyroid eye disease classically involves an early active inflammatory phase followed by a recovery phase, fibrosis and finally quiescence, typically spanning 12-24 months, with rehabilitative surgery commencing in the inactive phase. One of the benefits of the length and structure of my fellowship was the opportunity to follow patients with a lengthy clinical course, see evolution of their disease and long-term impact of multiple treatments; thyroid eye disease being a particularly good example. At the start of my fellowship I examined a patient with exceptionally severe thyroid orbitopathy, seemingly refractory to prior immunosuppression. Profound functional deficits impaired every facet of his life and as we embarked on rehabilitative surgery I did not know how much recovery could be expected. Over 18 months the patient experienced ups and downs, false dawns and even disease reactivation, which is unusual in thyroid eye disease. However, to the credit of my mentors and the patient, a steady course was steered amongst the peaks and troughs. It was very rewarding to see the patient emerge, following maximum orbital decompressions, strabismus and eyelid surgeries with good function, aesthetics and a renewed joie de vivre. Thyroid eye disease can be somewhat melancholy for both patients and doctors, but I saw great successes and came to enjoy the challenge of managing this potentially devastating disease.

Craniofacial disease

A multidisciplinary craniofacial clinic took place one evening a month at Rady's Children's hospital and this provided experience in clefting and craniosynostosis patients. A charity called Fresh Start brought children with complex medical needs from



With my fellowship mentors, Dr Don Kikkawa (right) and Dr Bobby Korn (left).

Mexico for treatment in San Diego. Nurses, theatre staff and doctors, including my mentors, would volunteer their time to contribute to patient care. For oculoplastic trainees it was an opportunity to see the management of complicated craniofacial disease. Paediatric orbital vascular anomalies also fell under our remit. The treatment of orbital lymphangiomas with intra-lesional bleomycin under direct vision provided some remarkably rewarding results.

Endoscopic DCR surgery

Dr Kikkawa and Dr Korn are strong advocates of endoscopic dacryocystorhinostomy (DCR) surgery and with their expert tutoring, I quickly became a proponent of this technique. Endoscope use and the conversion between the 2D screen image and 3D reality was a little humbling initially but it soon clicked into place. Aside from anatomical case selection and good teaching, I did also receive one tip from an experienced endoscopic sinus surgeon. He suggested to improve one's grasp of the conversion of 2D images to 3D tactile surgery, simply 'play more video games'. It also gives you a good excuse to play video games!

Orbital fractures

Orbital fractures in San Diego were often repaired by our service so I was fortunate to benefit from great training in this surgery. A trans-conjunctival approach with a small retractor recession on closure, produced elegant results with no post-op lower lid retraction or scarring. Interestingly I also saw two children present beyond

48 hours with a 'white eyed blow out fracture' including inferior rectus entrapment and vasovagal symptoms. Despite a very purple ischaemic looking rectus at the time of surgery I was pleased to see that a great functional outcome was achieved in both patients.

Eyelid skin cancers

California is synonymous with sunshine, beaches and surfing so it will not come as a surprise that eyelid skin cancers were prevalent. Patient awareness in California was generally very good, with the majority of patients having at least annual dermatology surveillance and a large number of patients had already dealt with multiple facial skin carcinomas so were au fait with the process. Although we saw a large number of skin carcinomas, fortunately, most presented in a timely fashion. In contrast, in my UK experience, although the volume appears lower, I felt a significant patient cohort presented with more advanced disease due to reduced patient awareness. Only a few patients at UCSD required exenteration or large pedicle facial flaps. In most patients periocular flaps such as Hughes, Tenzels and glabellar flaps could be employed, and I benefited from good exposure to a full spectrum of eyelid reconstruction techniques.

Cosmetic surgery

Cosmetic surgery is of course very prevalent in California. I certainly noticed patients were very open to discussing previous and future surgical and non-surgical rejuvenation

procedures. Occasionally, the best intentioned cosmetic procedure does not always produce the desired aesthetic or functional result. Unfortunately, we would see patients with a prior lower lid blepharoplasty coupled with progressive actinic damage over the years resulting in lower eyelid retraction and lagophthalmos. The oculoplastic unit at UCSD had built up a strong reputation in revision surgery so I was fortunate to learn the nuances of patient selection, counselling, techniques and 'minimally invasive' interventions such as filler or free fat transfer, especially within the upper eyelid. In managing lower eyelid retraction a porcine acellular dermis called Enduragen was often used as a spacer between the tarsus and recessed lower lid retractors, an excellent alternative to traditional hard palate graft. This was combined with a pre-periosteal mid-face lift, bone drilled canthopexy and was very successful in augmenting the anterior lamella and correcting the lower lid retraction without necessitating a skin graft.

Research

The ophthalmology department at UCSD has a very strong cohort of clinician-scientists, and fellows

had excellent opportunities for research and publication. I became involved in a number of research studies, book and video chapters. One particularly interesting project involved medical device innovation, working alongside undergraduate engineers. This allowed me to develop new skills and knowledge, as well as having the privilege of being part of a team to patent a medical device and garner a glimpse into the commercial world. The ophthalmology research department had a 3D printer, which facilitated both clinical and educational use. The clinical volume always meant there were interesting patient case series to be reviewed.

The team

The San Diego fellowship intensity and small unit fostered a wonderful team bond. Our wives and better halves probably thought we spent more time with the team than with them. We got to know each other's families well and even had some 'oculoplastic field trips' away, with just enough time between high powered research meetings to allow white-water rafting, car racing and golf. I was extremely well fed (+15kgs! at the end of the fellowship) by Dr Kikkawa and Dr Korn. We would usually have dinner together twice a week, before or after evening cases or

clinics. I got to know all the best places in San Diego to eat, even those still open at midnight. All UCSD staff, from the administrators, nurses, technicians and other doctors showed tremendous hospitality, kindness and generosity throughout my fellowship. Having formed such wonderful friendships and learnt so much, it made it tough to leave. I will forever be extremely grateful to my mentors Dr Kikkawa and Dr Korn for everything they have shared, the skills I have gained and for Keeler and the Royal College of Ophthalmologists for the 2012 Keeler Scholarship.



Richard L Scawn,

Oculoplastic fellow,
London, UK.

E: richardscawn@me.com

Declaration of Competing Interests
None declared.