

An ophthalmology elective in the South Pacific

BY LIZZIE ROSEN

For the four weeks of September 2024, I was lucky enough to embark on an ophthalmology elective in the Kingdom of Tonga, a small island nation in the South Pacific Ocean. The Tongan people are incredibly friendly and upbeat, and it was a pleasure to be immersed in the vibrant culture for a month. We experienced traditional Tongan dancing, an umu (underground cooking pit), local drinks and more.

The placement was organised via the Australian company, DocTours, and I would highly recommend them to those interested in this area of the world! There were placements available in many different specialties in several different countries, however ophthalmology was the specialty I'd had in mind, and a love of rugby and the sea drew me to Tonga.

The eye department at Vaiola Hospital (Figure 1) in the capital of Tonga, Nuku-aloa, consists of two consultants, a trainee and several nurses. Duke Mataka was the consultant supervising my placement. The ophthalmology department function very much as a team, enjoying shared lunches every day in the staff room and undertaking outreach trips to the outer islands together. From the first day they encouraged me to get stuck in with biometry and panretinal photocoagulation (Figure 2), amongst many other things. The team even put on a celebratory birthday lunch for me whilst out there (Tongan portions of course!). Flip-flops and sandals are the norm in clinic and in theatre, along with the traditional Tepenu (suit skirts), and intricately patterned



Figure 1.

colourful shirts and dresses. This made for a much brighter array around the hospital.

To become a doctor in Tonga, students travel to Fiji to train at Fiji National University medical school and then go on to complete an 18 month-long internship on outer islands of Tonga, before being assigned a specialty to train in.

While a wide range of presentations were seen during the four weeks, by far the most common eye problems were diabetic eye disease, pterygia, cataracts and trauma. The Tongan population is one of the most obese in the world and non-communicable diseases such as diabetes and heart disease are now the leading causes of

death. In fact, in the eye clinics, the mean random blood glucose reading we recorded of patients over the four weeks was 13.4mmol/L, almost double the 'normal' threshold of 6.9mmol/L.

Diabetic control and management are certainly approached with a relaxed attitude by patients there, with amputations and ophthalmic sequelae commonplace. They often use the phrase 'Tongan teeth' which alludes to the vast number of people with metal fillings due to cavities. The available treatments for diabetes itself in Tonga are metformin and insulin, and anti-VEGF and pan-retinal photocoagulation are available for treating diabetic eye disease. Over the



Figure 2.



Figure 3.

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next decade it will be fascinating to see if the more recent pharmacological options developed such as GLP-1 mimetics make their way to Tonga, and what impact these could have on diabetic eye disease.

The prevalence of pterygia (Figure 3) has a perhaps unsurprising cause: the extreme ultraviolet levels in the region. Ultraviolet protection in the form of hats and sunglasses amongst locals is rare and many people work outside for extended periods of the day. The pterygium operation in Tonga is much the same as in the UK, however the conjunctival graft is always sutured to the sclera rather than any other methods of fixation. Often patients have pterygia bilaterally and the surgeries are quite successful. Also in the minor ops clinic, there were several patients attending for a mysterious 'mole removal' procedure. These often turned out to be skin tag removals which had somehow ended up on the ophthalmology minor ops list. One patient had over 20 skin tags removed by the team in one sitting.

The approach to theatre sessions was both similar to our own and at times starkly different. For example, the all too familiar World Health Organization (WHO) sign in / sign out checklists are alive and well in the Vaiola theatres. However, unlike in the UK, two patients would undergo small incision cataract surgery (SICS) side-by-side in the same theatre with the two consultants operating simultaneously. This was certainly a shock at first as this is not something you would ever see in British theatres. Prior to cataract surgery, the patients are worked up with contact biometry and are scheduled in for surgery often just one week later due to small waiting lists. The lenses available in Tonga are mostly gifted from Australia and New

Zealand. After SICS operations, the patients are followed up at one day, one week and one month post op, often with very good results.

Eye trauma is also fairly common in Tonga. This is in part due to more lax health and safety regulations, such as wearing goggles when working. We saw patients with fruit juice in the eyes, people involved in bar fights with ruptured globes, and various corneal abrasions. Management of these is much the same as at home. Occasionally, patients will present with something the Tongan team are unequipped to deal with and so patients will often be referred to New Zealand, depending on available government or personal funding.

The island itself was, as expected, stunningly beautiful and luckily we managed to find some free time for exploring. The humpback whale swim (Figure 4) was a particular highlight, as was watching a Fiji vs Tonga rugby match (Figure 5). Healthy eating and regular exercise were unfortunately not much of a feature of our time in Tonga as they were both difficult to come by due to limited fresh produce and feisty stray dogs. However, there is a wide range of different cuisines available if you know where to look. Tonga all but shuts down on Sundays due to churchgoing and family time but we were fortunate enough to be invited to our host's daytime meal. Despite the quantity of new ophthalmology knowledge learnt, it took until my third week to finally learn the Tongan word for eye; mata. After such an incredible time, it was very difficult to say goodbye. Thank you to the Vaiola ophthalmology team and to Dayspring Lodge for welcoming me so warmly. I'm sure I will be back.



Figure 4.



Figure 5.

AUTHOR



Lizzie Rosen,

Final Year Medical Student, University of Bristol, UK.

SECTION EDITORS



Abdus Samad Ansari,

Post CCT Senior Glaucoma Fellow,
Moorfields Eye Hospital NHS Foundation Trust.

abdus.ansari@kcl.ac.uk



Rebecca Turner,

Ophthalmology Clinical Director Consultant Nurse,
Oxford Eye Hospital, Oxford, UK.

rebecca.Turner@ouh.nhs.uk

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