Charity work in Cambodia: Culture, cataracts, and cruelty

BY BITA MANZOURI

Cambodia has one of the lowest numbers of eye specialist doctors per capita in the world, and Bita Manzouri takes us on a journey into the charitable work of the Khmer Sight Foundation who are working to combat this.

"Ut omens videant"
– motto of the Royal College of Ophthalmologists

Surgeons in the National Health Service (NHS) are accustomed to the challenges posed by cuts in finances and the consequences on resource planning, but we also readily forget that we are based in a high-income country where the only limitations to obtaining consumables and equipment are cost and bureaucracy. Sometimes it would serve us all well to appreciate the challenges posed to our colleagues in less advantaged areas of the world. For this reason, and the desire to help those less privileged, a group of consultant surgeons from the UK visited the Khmer Sight Foundation (KSF) in Phnom Penh, Cambodia in January 2024.

The KSF was launched in 2015 to address the causes of preventable blindness in Cambodia. It is estimated that there are 10,000 Cambodians that suffer from avoidable blindness each year. Given that Cambodia has one of the lowest numbers of eye specialist doctors per capita in the world, and that 18% of the population live below the poverty line, mainly in rural areas, access to eyecare is very limited or non-existent. The purpose of KSF is to provide free screening for Cambodians with vision problems to identify cataract, pterygium and other treatable cases of visual loss. Cases of cataracts and pterygia are surgically treated by teams of self-funding volunteer medical teams from abroad who spend a um of a week at the KSF facility. More than 26,000 cases of cataract and pterygium have been treated under the umbrella of KSF. The KSF charity is led by a philanthropic management team that volunteers their time to ensure KSF has the maximum impact in Cambodia. The KSF is supported in its endeavours in the UK by Professor Sunil Shah, who has visited and operated at the facility many times and was our main point of contact for guidance.

Khmer Sight Foundation was previously visited in 2017 by Mrinal Rana, Consultant Corneal Specialist, as a lone visitor from the UK but working as part of an international team. This time, leading up to the January 2024 trip, he decided to assemble a team from the UK who would work together to deliver eyecare at KSF. The team consisted of five consultants (Ben Clarke, Bita Manzouri, Mrinal Rana, Indy Sian, and Paul Tomlins), one anaesthetist (Subramanium 'Krish' Radhakrishna), one senior trainee (Puja Samantaray), three scrub nurses (Ashamol Abraham, Peggy Bohan, and Melanie Speed), and two optometrists (Rushita Dave and Krupa Mistry). We were joined by a veterinarian with a specialist interest in eyes (Bactelius Turicea) travelling from the USA.

The KSF facility has limited resources, being mainly dependent on donated equipment. Their current phacoemulsification machine, an Alcon Infiniti previously donated, has recently been deprecated, meaning that the machine is no longer serviceable (which it would have





been at a cost since it was donated), nor are any of the parts available for purchase. Many of the consumables, including the intraocular lenses, have also been donated and so the power ranges available can be limited. As surgeons operating in the UK, the equipment (e.g. operating beds with head support), instrumentation (capsular hooks, nylon sutures, etc., etc.) and pharmacological agents (phenylephrine Minims®, Mydrane®, Healon®) that we take for granted were not readily available for use in surgery and we had to ration some of the agents needed for surgery between patients (e.g. Vision Blue® capsular dye). Although as a team we had taken some instruments / lenses / consumables with us (e.g. capsular hooks, Healon®, iris hooks), the quantities available were simply not enough to meet the needs of all the patients.

To understand the characteristic patient we saw, one has to understand the cultural history of Cambodia. From the 15th Century, Cambodia had been under the French protectorate until World War II when it became occupied by the Japanese. Cambodia gained its independence in 1953. The Vietnam War extended into the country in 1965 and culminated in the installation of the US-aligned Khmer Republic in 1970. This was a military dictatorship backed by the USA that overthrew the government and the Cambodian monarchy. The Khmer Republic was in turn overthrown by the Communist Party of Kampuchea, perhaps better known as the Khmer Rouge. This regime, led by Pol Pot, was a highly autocratic, totalitarian, and repressive regime that put emphasis on absolute self-sufficiency resulting in agricultural reform with subsequent famine, and loss of foreign trade such that the lack of simple medicines led to thousands of deaths from treatable diseases, such as malaria. Schools were closed, and indeed, education was prohibited; any indication that a person was educated, e.g. wearing glasses (as most myopes do), resulted in death; the intellectual classes were simply eliminated. The Khmer Rouge murdered 1.5–2 million people, nearly 25% of the population. Emphasis was placed on racial national purity resulting in the genocide of Cambodian minorities. Summary execution and torture was carried out by its cadres.

With this insight into the history of Cambodia with the Khmer Rouge government in power in the late 1970s, it began to dawn on us that the patients we saw in the clinic (who would have been young adults who survived the Khmer Rouge period of power) were reflective of the brutal campaigns of the Khmer Rouge. Most were illiterate farmers for whom the cost of cataract surgery, estimated at $100 per eye, would be akin to several months of income (40% of Cambodians earn $2 per day).

To say the cataracts themselves where challenging would be an understatement; often, these were advanced (cataracta nigra) with the patient presenting with counting fingers vision or worse with no fundal view; these types of cataracts being difficult to phacoemulsify. An unexpectedly high number of patients with lax zonules, often superiorly, were noted. The question arose as to whether these were the result of the brutal campaigns of the Khmer Rouge and the regular beatings with bamboo sticks and other weapons around the head, explaining this disproportionate clinical finding. Most of the patients were hyperopic with shallow anterior chambers; the myopes had simply been murdered. In general, pupil dilation was poor, and with small facies and shallow orbits the peribulbar blocks given (to ensure no eye movement during surgery) ran the risk of increasing vitreous pressure. With the lack of communication and the overwhelming experience for the patients, breath holding by the patient was commonplace (perhaps for the surgeon too!). Given that two of the three operating tables had no head rest, head stability also became an issue. All cataract surgery was performed via a superior incision. All the operations took a long time. There was the opportunity to perform small-incision cataract surgery (SICS) but we had to approach these patients with some knowledge of the procedure; there was no possibility to be taught this technique.

Although we had three scrub nurses as part of our team, we were fortuitously also supported by a fantastic team of Cambodian scrub nurses, a resident highly knowledgeable and skilled optometrist originally from India (Prathamesh Waghmare), and a team of medical student volunteers who were invaluable in our interactions with the patients, not only as translators, but as visual acuity testers, patient coordinators, and patient carers.

The volunteers would bring to the clinic patients screened in the community

and deemed needing either cataract or pterygium surgery. They would perform their visual acuity checks (patients were often illiterate so the Tumbling E chart was used), act as translators for the history taking, inform the patient of the contents of the consent form, and move the patient from area to area as they went from examination to biometry measurements to surgery to post-op care.

Every expedition has its own challenges and rewards. Our challenges included the language barrier and our absolute reliance on medical student translators and the use of sign language. Very few patients could read, even fewer write so the consent was given with an inked thumbprint. The equipment was old – an old microscope and an old phaco machine – consequently, simple consumables for the equipment were not existent. Gloves were used as microscope handle covers, for example. The capsular rhexis was performed in a shallow anterior chamber with loose zonules over a white cataract with no red reflex with a dispersive viscoelastic. There were no 10/0 nylon sutures, very few Minim® drops, an insufficient supply of dilating drops, no preservative free antibiotic for intracameral use (all patients were given subconjunctival gentamicin and topical chloramphenicol), no iris expander devices (although very thick iris hooks were available), and a limited range of intraocular lens powers and injector devices. All patients had three lens powers chosen for them: an in-the-bag lens power, a sulcus lens power, and an anterior chamber lens power, just in case. Although our team had a vitreoretinal surgeon, no vitreoretinal handpiece was available for the phaco machine. It is not surprising that dropped nuclei were commonplace as opposed to a rarity. Luckily for us, unlike the visiting team before us (who had nine dropped nuclei), we only had the one case.

On average we saw about 50–60 patients per day and operated on between 25–30. We also saw walk-in patients who had heard of the clinic and wanted an eye check. One notable patient was a 49-year-old farmer who depended on using his motorcycle to ferry his goods to the local market. His vision was counting fingers in both eyes. He was advised he should not be riding a motorcycle but he was clearly not in agreement since his livelihood depended on this route to trade. The diagnosis was retinitis pigmentosa. Another patient was an American living in Cambodia who had heard that a group of foreign surgeons were providing free cataract surgery. He was advised that this was a charitable mission providing surgery to those who could not afford it and that he should seek help either in a government hospital in Cambodia or back in the US.

There is no challenge without learning. What did we as surgeons take away from this experience? First, the ability to think on your feet and improvise when you needed an instrument that was not available or you were handed a lens injector you had never used before. Secondly, the camaraderie and the resource of having consultant surgeons available to advise and reassure as an operative case became unexpectedly more difficult. The ability to handle vitreous, especially without a vitrector, became second nature in a very short period of time. Postoperative corneal oedema was the norm, as opposed to the exception, and it was reassuring to hear that in virtually all of these cases the oedema cleared by the time of the patient's first community postoperative visit one month later. All patients were prescribed hypertonic sodium chloride drops on discharge to help clear the expected corneal oedema.

It is always grounding and enlightening to see how the less privileged areas of the world manage with their limited resources; it is a demonstration of sustainability at its best, and lessons can be learnt for use in the operating theatres of high-income nations that generate their multiple daily bags of medical waste. The KSF operating theatre consisted of three beds (only one with head support) alongside which one scrub nurse prepared one scrub trolley used throughout the day. Instruments needed for each patient were obtained from 'buffet' style instrument trollies, used on the patient, and then sent for in-house sterilisation. Most of these instruments were single-use instruments that were sterilised and used again. The trolley covers and instruments that were not used were not discarded between patients. The phaco tubing was not replaced between patients, but the fluid simply emptied; given it is a one-way system, the risk of infection was virtually non-existent between patients. No cover was used for the screen of the phaco machine, but the settings were changed with the use of a syringe plunger. A small drape was used on the patient to cover the face and eyes only, no full body drape. Once fully scrubbed for the first case, for the subsequent cases, the surgeon needed only to rewash their hands and change their gloves; no gown change was necessary. Intracameral antibiotics were not available but povidone iodine was used in all cases. Despite all this, the rate of endophthalmitis in the facility is no greater than the rate seen in the UK.

All in all, it was a challenging, eye-opening, educational and, above all, immensely rewarding experience. Such endeavours should be encouraged in the NHS. You are not only exposed to healthcare in less privileged parts of the world but when you come back home, you may value our NHS for its founding principles and all that it offers despite all the challenges it faces. One can even go in so far as to say that a charitable mission should be part of the revalidation cycle once every five years.

Would we do it again? Absolutely, without hesitation. Was it fulfilling? Incredibly so. Did it make us better surgeons? Without doubt. Did it make us more humble and more grateful for what we have as medical practitioners back home? One can only hope…

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None declared.