Volunteering for vision in rural Africa

It was late January and amidst a tropical thunderstorm when I arrived in Lusaka, Zambia to take up a six month post as Visiting Lecturer in anaesthesia at the University Teaching Hospital (UTH). My work as part of the Zambia Anaesthesia Development Project (ZADP)[1] has been at times exhilarating, and at others somewhat overwhelming. But the cultural melting pot of Africa has captivated me at every turn.

Zambia is in the midst of an anaesthetic crisis. Prior to 2012 the country had not trained a single anaesthetic doctor for half a century. At present a population of more than sixteen million are served by a meagre thirty. Anaesthetic clinical officers bravely shoulder the majority of the workload. But in some rural areas intern doctors with little or no anaesthetic training may be the only option, putting both patient and doctor at unacceptable risk.

At any one time there are between four and six international doctors volunteering with ZADP. Our role is primarily to provide clinical supervision for the eighteen doctors currently enrolled on the four year anaesthesia Master of Medicine programme. Putting patient safety at the forefront we also facilitate quality improvement projects, research and development of departmental protocols. Several inspiring graduates have already taken up vital posts within the country.

Although the majority of my time is committed to the vast and sprawling tertiary centre that is UTH, my interest in ophthalmology brought about an intriguing opportunity to work in a rural setting.

Zimba Mission Hospital[2] is a Wesleyan Church enterprise located in the small town of Zimba in the Southern Province. In 2001 International Vision Volunteers (IVV) built an eye hospital on the campus and it was here that I was approached to provide paediatric anaesthesia. Eye surgeons from IVV (a U.S. team) and from Lusaka Eye[3] volunteer at this institution several times a year. The eye hospital has a fantastic reputation and patients travel incredibly long distances to receive treatment there.

The focus of ophthalmics at Zimba has primarily been adult patients under local anaesthesia so paediatric general anaesthesia presented an interesting challenge. Although general anaesthesia has been performed at the eye clinic in the past the only kit I could guarantee for this visit was a half full oxygen cylinder! Planning commenced several weeks in advance with amassing all the drugs and equipment necessary to provide paediatric anaesthesia and packing it up for the two hundred and fifty mile car journey to Zimba.

With the nearest anaesthetist over fifty miles away I enlisted a colleague to join me and we set off down the heavily pot-holed road from Lusaka to negotiate the slalom of heavy goods vehicles. Six hours later we pulled into the dusty town of Zimba. An ancient anaesthetic machine lurked in a corner of the otherwise modern eye hospital theatre. We weren't surprised to encounter some problems – a huge leak in the circuit and a non-functioning ventilator. We did however have an oxygen supply, functioning flowmeter and halothane vapouriser, so had no problem with our Ayre's T-piece connected to the common gas outlet. With the machine checked and an absence of lodging in Zimba we overnighted an hour further south in Livingstone.

Driving into Zimba only an hour after sunrise we discovered a sizeable group of patients already congregated outside the hospital. Word of these operating lists spreads far and wide with announcements on local radio stations. Our first task that

morning was pre-assessment. With over seventy languages spoken in Zambia we found ourselves heavily reliant on local nursing staff for translation. The paediatric caseload was focused on congenital and traumatic cataracts. Our recipe was simple - intravenous induction with propofol, supraglottic airway device and spontaneous ventilation on oxygen and halothane (the perils of which I was by this point already very familiar with!). A combination of topical 2% lidocaine and intravenous diclofenac proved adequate analgesia. For monitoring a Lifebox[4] served the purpose well. ECG and blood pressure monitoring were far beyond our resources.

Our dual role as anaesthetists and recovery nurses made for slow progress through the GA list. But it also provided a fortuitous opportunity to assist the adult patients by providing Sub-Tenon's anaesthesia whilst each child recovered fully. Sub-Tenon's anaesthesia is uncommonly practiced in Zambia. The normal procedure for cataract surgery is a retro-bulbar block performed by the surgeon. Naturally we found ourselves without a Sub-Tenon's cannula but this issue was easily circumvented with a technique I learnt from Dr. Raval, a consultant anaesthetist at Moorfields Eye Hospital. The blue Venflon sheath lived up to expectations. Five blocks later with perfect akinesia and the surgeons were converts!

Volunteering at Zimba was an incredibly fulfilling and rewarding experience. These stoical patients survive in abject poverty with little access to eye care. Many of them travelled hundreds of miles to reach the clinic. But they arrived with a smile and it was a privilege to care for them.

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References

1. http://zadp.org (accessed 14/04/17)
2. http://zimbamission.org (accessed 14/04/17)
3. http://lusakaeyehospital.org (accessed 14/04/17)
4. http://.lifebox.org (accessed 14/04/17)