Right to Sight project

Patients and the Punjab

Una Mackie dispensing glasses

Dr Scott Mackie describes a recent venture by UK practitioners providing clinical and educational support

A team from the UK consisting of four optometrists, an ophthalmologist, a GP and three dispensing assistants have just returned from a 'Right to Sight' project which consisted of knowledge transfer lectures/workshops and primary care clinics where patients were either treated, listed for surgery or dispensed spectacles.

The project was initially conceived on a trip to the Punjab in 2012 where colleagues and I visited a charitable hospital. Here I noticed a need for better education and provision of eye care for the vulnerable and poorest in this society. Working alongside a humanitarian ophthalmologist, Dr Jasdeep Sandhu from the San Sanwan Charitable Hospital, the team put together a programme of teaching for nursing students, optometry students and ophthalmologists.

Concept

The World Council of Optometry (WCO) supports the initiative of knowledge transfer and self-funding of eye clinics through stakeholder engagement. However, we believe that the provision of second-hand spectacles in excellent condition still has a role to play in preventable vision loss throughout the world where self-funding schemes are not presently available or in the foreseeable future. As such we needed a programme in the UK where we could obtain this supply.

Working for Visioncall in professional services, I was able to set up 'Specsort' where prisoners from HMP Barlinnie received training and conducted focimetry on over 10,000 pairs of spectacle donated by Visioncall patients. These were then grouped into spherical powers and sorted using criteria to discard those with significant astigmatic or anisometropic components. Next an email went out to friends and colleagues asking for volunteers to self-fund their travel to India to take part in the 'Right to Sight' project. The response was fantastic and a team of eight volunteers set off in June.

Rewarding clinics

Clinics ran over three days and over 750 patients were seen. The dispensing team consisted of Dr Clemency Shadbolt, Mr James Webb, Miss Una Mackie and Mr Adir Sandhu with an energetic bunch of interpreters made up of hospital staff and local volunteers. Many patients had travelled long distances or waited several days to be registered and seen and it was rewarding all patients were able to be dispensed form the 3,500 stock spectacles taken from the UK or 'special prescriptions' made up through funding from Alcon India (for those with significant astigmatism or anisometropia).

Some interesting trends emerged. There was a distinct lack of myopia. Presbyopia started on average around 35 years of age with some patients requiring a +1.00 Add as young as 30 years. There was little macular degeneration but cataract was prevalent in patients, on average 20 years sooner than that found in the UK with a patient as early as 40 years having significant opacity requiring surgery. Frequent anterior eye discomfort from allergic conjunctivitis and dry eye was found, as well as a significant incidence of injury from trauma resulting in minor to major loss of visual function.

Unusual pathology seen included congenital bilateral anophthalmia, retinopathy of prematurity, acute hydrops secondary to keratoconus, bilateral buphthalmos from congenital glaucoma, bilateral corneal melt from smallpox ulcers, total disc cupping throughout an entire family, recurrent sebaceous gland carcinoma, subluxed lens and retinal detachment from congenital aniridia, and bilateral dellen causing corneal thinning and constant blinking through irritation.

Patient with a sebacious carcinoma requiring surgery

Right to Sight volunteers

Knowledge transfer

Optometrists Patrick Richardson (University of Ulster) and Sean O'Brien (Rotherham) provided continuing education and training on the second day of the eye camp to 60 undergraduate nursing and optometry students from Jalandhar. This included retinoscopy workshops using 'practice eyes' kindly supplied by Prof Gunter Loffler (Glasgow Caledonian University) and didactic lectures including basics of refraction, and ocular pathology

Drs Jasdeep Sandu and Jaswan Sandhu organised a Continuing Medical Education (CME) meeting for ophthalmologists with three CME points allocated by the Punjab Medical Council. This meeting was the largest to date with 45 attending including special guests, some travelling a considerable distance.

Lecture programme

Three lectures were presented by the visiting UK clinicians. Dr Lennox Webb (Glasgow) presented a lecture entitled 'The Evolution of the Eye'. Dr Webb discussed various animals and how they have adapted their compound or camera eyes, such as raptors with bifovate (two maculae) eyes to obtain precision acuity, the gecko using vertical polycoria (three eye slits) to obtain stereopsis from each eye independently, the common bee which has a 10-fold increase in the range of wavelengths it can see compared to humans, the Portia fimbriata (jumping spider) with six separate pairs of eyes to maximise its survival and cats and other nocturnal hunters which have a tapetum lucidum behind the retina to use all reflective light to improve night vision.

The author of this article presented a lecture entitled 'The day in the life of a Scottish optometrist'. I explained that through stakeholder engagement and more training optometry and ophthalmology in Scotland were working together to improve patient care and encouraged those in the Punjab to look at ways to work together. I outlined various new developments including the SIGN guidelines for glaucoma diagnosis, independent prescribing and shifting the balance of care from secondary to primary, where appropriate. I finished with an update on new technology and how this changed patient pathways.

Professor Brendan Barrett (University of Bradford) presented a lecture entitled 'Amblyopia the past, the present and the future'. Interestingly the definition of amblyopia has been contested because typically it is based on a diagnosis of exclusion in which there is a loss of best corrected visual acuity which is not caused by pathology. Amblyopia is commonly associated with either strabismus or anisometropia; however, less frequently it can occur in patients with either high astigmatism (unilateral or bilateral) and/or high bilateral refractive error. Professor Barrett presented his research on amblyopes where patients experienced tarachopia (distorted vision) at high frequency deprivation. He summarised the pioneering work of Nobel Prize winners Hubel and Wiesel who showed that the effect of monocular deprivation can be reversed during the sensitive or critical period (typically in humans this was thought to be up to eight years of age). However modern research suggests the critical period does not finish at eight; indeed teenagers and even adults with amblyopia can benefit from amblyopia therapy. Irrespective of the presumed cause or of the depth of amblyopia, treatment should first consist of refractive adaptation for a minimum of 16-18 weeks before any form of therapy (eg patching) is instigated. Recent research shows that mild amblyopia is very difficult to treat and that forms of treatment which unlike patching try to develop binocular mechanisms may provide superior results. Despite sizeable and continuing research attention, however, this is a topic which continues to command a lot of research.

Brendan Barrett preparing a chapati

Social element

I am always inspired by fellow colleagues and individuals who give up their time to assist in projects like these but the team talk on the last night showed that the memories from the trip were worth it!

Dr Scott Mackie works in private practice and is a consultant to the industry

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