General Ophthalmology

Chairperson: T Allan

The Prevalence and Treatment Requirements of Patients with Diabetic Retinopathy at the Georgetown Public Hospital Eye Clinic

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Aim: This study aimed to evaluate the prevalence and treatment needs of diabetic retinopathy (DR) patients, along with the proportion of all grades of DR and the percentage of vision-threatening diabetic retinopathy (VTDR), at the Georgetown Public Hospital Corporation Eye Clinic.
Methods: A cross-sectional study was done, using an interviewer-administered questionnaire, to collect data from consecutively selected patients with self-reported diabetes. This was followed by ophthalmological evaluation using a slit lamp and indirect ophthalmoscopy by a certified ophthalmologist. This study was conducted over five weeks in August–September 2014.
Results: Of the total 309 diabetic patients, 23.6% were new patients, while 76.4% were follow-up patients. Median age was 62.5 years. Two hundred and two (65.4%) were female. Prevalence of DR was 56.7%; 119 patients (41.9%) had some form of non-proliferative DR, while 37 (13.0%) had proliferative DR. Sixty-two patients (21.8%) were found to have VTDR. Of 42 patients (14.8%) who required laser therapy, 10 (3.5%) required laser therapy alone, while the others also needed other treatment.
Conclusions: The prevalence of any degree of DR among diabetic patients of the Georgetown Public Hospital Corporation Eye Clinic was 57% over the five-week period. Twenty-two per cent of patients with proliferative DR were found to have VTDR and 15% needed some form of laser surgery, either alone or in combination with vitreoretinal surgery and/or medical therapy – services which are currently not available in the public system.

BOOST: Measuring Cataract Surgical Outcomes in Settings Where Patients May Not Return Postoperatively

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The Better Operatives Outcomes Software Technology (BOOST) trial is an extensive multi-country field test of newly developed software designed to capture the quality of cataract surgery performed in low-resourced hospitals. BOOST adopts a novel approach to data collection at minimal cost and inconvenience to the patient and hospital. Driven by strong demand from potential users, the software will integrate with an online platform to share cataract surgical outcomes data globally. The project is being led by a consortium of key eye health nongovernmental organizations (NGOs) together with experts in the field and the support of the Aravind Eye Care System.

The BOOST software aims to improve the collection and use of cataract surgical outcomes data in hospitals in low and middle income countries, where health information systems are often inadequate and patient compliance with their post-surgery appointment is low. BOOST is based on a new approach to measuring patient visual acuity at one to three days post-cataract surgery, rather than the traditional four to six weeks post-surgery. This shorter time-frame allows the hospital to record patient visual acuity while the patient is still in the care of the hospital and avoids data loss from missed postoperative reviews, the rates of which are high. The Prospective Review of Early Cataract Outcomes and Grading (PRECOG), an observational study conducted in 40 hospitals across 10 countries and published in Lancet Global Health (Congdon, 2012), found the one- to three-day approach to provide a reliable measure of cataract surgical outcomes.

The BOOST trial translates the findings of PRECOG into an app for monitoring the quality of cataract surgery on cellphones, laptops or other devices. BOOST guides users

through simple steps to input visual acuity data, analyse the combined results and identify areas for improvement in surgical practice. Users can benchmark their performance against others locally and globally in the Cloud. Subsequent interviews with nearly 100 hospitals in Asia, Latin America, Africa and the Pacific found strong demand for the BOOST prototype.

BOOST offers free, readily accessible and easy to use software that is responsive to the needs and constraints of hospitals in low-resource settings. Initial funding was secured from the Seeing is Believing Fund to refine the software, develop the online server and expand the trial.

An extensive field test is underway in more than 100 hospitals and preliminary results will be available in 2016. The study will be presented at an expert round table hosted by the World Health Organization to be held in June 2016.

Monoclonal Antibodies: What Are They, What Do They Do?

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Commercial preparation of monoclonal antibodies is revolutionizing the practice of medicine and they are probably the most important recent breakthrough in medical treatment. They are used to treat cancer, infections, age-related macular degeneration, diabetic retinopathy and proliferative retinopathy. The paper explains their structure, their manufacture and their uses.

Research and Development in the Caribbean

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Research is often thought of as something abstract and divorced from actual clinical reality: cells, cultures and lab rats. "Action research", however, is focussed on solving real health problems facing a country or community. How do we know if cataract surgery has gone well when patients do not come back after their operations? Do glasses really help children study better and if so, how do we get kids to wear them? How can we support patients with glaucoma and diabetes to return repeatedly to clinic for a lifetime of healthcare, when they do not even feel sick? This lecture will talk about these and other examples of "action research", and challenge the audience to think about eye health problems in their communities which might be attacked with this approach.