Saturday, March 10, 2018
Grand Ballroom, The Jamaica Pegasus Hotel

Marriage between Medicine and Ophthalmology: Diabetes (Diabetic Retinopathy) and Sickle Cell Disease (Sickle Retinopathy)

Chairperson: Dr Michelle Leighton

Updates on the Management of Diabetes

M Boyne

Diabetes mellitus is the second listed cause of death in Jamaica and it causes considerable morbidity. Management, although improving over the years, remains suboptimal in most countries. One reason is that management is complex, and needs to prevent cardiovascular disease and microvascular disease, while at the same time detect and manage early vascular complications. Improving blood pressure, lipids and hypercoagulation is essential for these goals. Glycaemic control gives the most difficulty to the general doctor and this talk will highlight glycaemic targets, a practical algorithm of stepwise care and the emerging roles of newer treatments that concurrently reduce macrovascular complications (SGLT2 inhibitors, GLP1-receptor agonists and pioglitazone).

Diabetic Retinopathy in Jamaica

L Mowatt

Diabetic retinopathy (DR) is a major cause of preventable blindness. Jamaica has an 11.9% prevalence of diabetes; ~300 000. However, 50% of them do not know that they are diabetic.

An University Hospital of the West Indies DR study showed that over 69.5% of patients had visually threatening proliferative diabetic retinopathy (PDR) and/or macula oedema. Type 1 Diabetes mellitus (DM) had a 1.88 odds ratio of getting PDR *versus* the Type II. Further, Type I DM males were more likely to have higher blood pressure readings, glucose levels and worse vision.

Another UHWI study confirmed that patients' knowledge and beliefs did not correspond to practice. Only 40% of patients exercised and 49.7% ate a special diet, despite > 95% knew the importance of this. A poorer quality of life (QOL) was seen in patients with severe visual impairment and lower socio-economic status. However, patients who were medication-compliant, exercised and ate a special diet had a higher QOL.

Several factors explain the high prevalence of DR in our society. The United Kingdom Prospective Diabetes (UKPDS) study determined ~37% of Type II DM have DR at the time of diagnosis, hence screening for DR should occur at the time of diagnosis. Diabetic retinopathy screening (DRS) can significantly reduce the incidence and severity of this disease. There are not enough Ophthalmologists in Jamaica to screen 300 000 patients annually. Therefore, the DRS programme, which involves Island-wide digital screening with the use of trained fundus photographers, screeners and graders with referral to Ophthalmologists of those cases that require treatment, needs to be implemented.

Sickle Cell Disease: The Approach in Jamaica in 2018

J Knight-Madden

One in 150 Jamaicans are born with sickle cell disease (SCD). This haemoglobinopathy potentially can impact the eye, and all other organs during the life course. The greatest risk of premature death occurs in the first five years of life, unless inexpensive interventions are utilized. From 2015–2017, the Ministry of Health has supported universal newborn screening. With the early use of penicillin and appropriate vaccines, regular anticipatory guidance and prompt attention to complications, survival is much improved and morbidity attenuated. Hydroxyurea and other newer therapeutic modalities in development continue to expand available options, potentially leading to continued improvement in the lives of those living with this disease.

Sickle Cell Retinopathy in Jamaica

H Vaughan

Sickle cell disorder is caused by substitution of amino acids at position six on the beta chain of the haemoglobin molecule. This gene is carried on chromosome 11. In sickle haemoglobin, valine is substituted for glutamine, and in haemoglobin C, lysine is substituted for glutamine in the same position. These substitutions cause polymerization of the haemoglobin and alters the shape of the red cell,

causing obstruction of small vessels in the tissues. In the eye, complications are proliferative and non-proliferative. Non-proliferative include infarction of flat bones adjacent to the orbit, conjunctival vessel sign, anaemia, iris atrophy, choroidal infarcts, salmon patch haemorrhages, sunburst spots, iridescent retinal spots and optic nerve sickle sign.

Proliferative changes result from vascular obstruction, include small vessel obstruction leading to arterio-venous anastomoses, new vessel growth and sea fan lesions caused by vitreous liquefaction and retraction. Management involves ophthalmic examination with dilated fundoscopy. Scatter photocoagulation for proliferative lesions, pars plana vitrectomy for intra-vitreal membranes, non-clearing vitreous haemorrhages and repair of retinal detachments. Photographs and video-clips will illustrate these lesions.