Diabetes In Practice (DIP) course in Africa: Nigeria

In November 2013 Dr. Carine de Beaufort (Secretary General International Society for Pediatric and Adolescent Diabetes (ISPAD), Clinique Pédiatrique/CH de Luxembourg), Prof. Margaret Zacharin (Royal Children's Hospital Melbourne Australia), and I traveled to Ibadan in Nigeria to contribute to the second ISPAD supported Diabetes In Practice (DIP) course in Africa. Bringing together 60 dedicated and enthusiastic medical and allied health staff from 15 centres across Nigeria, the course aimed to provide local health professionals with information about the diagnosis and treatment of diabetes, with a particular emphasis on type 1 diabetes (T1DM).

On arrival in Lagos Prof. Zacharin and I were met by Ayodeji Alaba (Ayo) the friendly office manager of Paediatric Endocrinology Training Centre of West Africa (PETCWA). Lagos is an exciting city and Ayo treated us to a car tour of some of the sights; the energy and colour of the locals in their Sunday attire made for a stimulating experience.

We commenced work on Monday morning at the Paediatric Endocrine training centre for West Africa (PETCWA) office in Lagos University Teaching Hospital, where Associate Prof. Abiola Oduwole warmly welcomed us. Prof. Zacharin started her two week intensive basic endocrine training with six fellows on the PETCWA program (Pediatric Endocrinology training Center West Africa supported by ESPE and ISPAD). I met with nurses, dietitians and doctors in the hospital to learn about differences in diabetes care in Australia and Africa.

After three days in Lagos, we were joined by Dr. de Beaufort and then travelled to Ibadan with nurses and the PETCWA fellows Dr. Tokunbo Jarret (Consultant Paediatric Endocrinologist University College Hospital (UCH) Ibadan) coordinated the Ibadan DIP course which was conducted in English, the official language of Nigeria and the first language for health professionals. Some of the 60 attendees had taken considerable personal risk in traveling across unsafe and conflict torn areas to be there.

At the start of the course all participants were asked to complete a written multiple-choice pre course assessment. After we cross marked the papers we chose to make several amendments to our presentations, increasing the emphasis on basic aspects of diabetes care. We recognized that there

was a very broad range of knowledge amongst participants in all areas of practice. We were surprised to see that the Australian concept of DEFG (Don't Ever Forget Glucose), (after ABC for the acutely unwell child) was unknown by all.

With representatives from many regions of Nigeria present, the first Nigerian Diabetes Register was compiled. Just 241 children with T1DM were registered from a country of 177 million people. Whilst recognizing that the incidence of T1DM varies widely across the world, this is in stark contrast to our two major Children's Hospitals in Melbourne (population 4.17 million) (1) where we have over 2,000 registered children with T1DM. Diabetes is however just one of many health challenges for a country with a 12.4% mortality rate for children under 5 years (2). We thought it very likely that undiagnosed diabetic ketoacidosis resulting in death may be a significant problem here, as in other developing countries with limited resources.

Following a first busy day providing education concerning diagnosis and practical management of T1DM in children and adolescents, we spent time in the late evening adjusting the course content for the following day. This was both to accommodate requests from course participants and to address topics that clearly needed further teaching.

A significant change was to broaden the discussion of available foods and particularly those which are appropriate and acceptable to the locals to treat hypoglycaemia. Although hypoglycaemia is a well recognized problem in anyone requiring insulin injections, the treatment of a low blood glucose level had not been well addressed by most participants. This was challenging for those of us used to having a wide variety of freely available "hypo food". Adjustment of insulin for a diet that in many cases is extremely high in complex carbohydrate and often low in protein poses further challenges. We hadn't appreciated the significance of food insecurity in some regions. Dealing with this in order to prevent hypoglycemia is not an easy task.

Other adjustments included information concerning complications screening and exactly what sort of problems might be encountered. We discussed the need for ophthalmologic review and for good foot care in a population where footwear is often worn infrequently. A request to talk about how a first ever diabetes camp in Nigeria might be established demonstrated a real interest in promoting a better life for children with diabetes.

The availability of insulin to children with T1DM is a critical issue. Most insulin in Nigeria is supplied free of cost by the charities “Insulin for Life” and “Life for a Child”. Major difficulties have been encountered to get it into the country . Severe shortage of insulin in some areas persists though ,with as an example, no free insulin delivery to parts of the North East of the country for the previous 17 months. No program for the care of T1DM can be effective without the guarantee of insulin supply. We hope that a political solution will follow soon to address these inequities.

During the second day of our program as participants became more relaxed, other practical problems emerged, such as the limited supply of drugs and equipment (insulin syringes, blood testing strips and meters, glucagon and sharps disposal containers). During scenario discussion it again became apparent that a major concern is how to promote euglycemia, and in particular to avoid hypoglycemia (hypo), when food security cannot be guaranteed. Most children are being given twice daily premixed insulin, so regular meals are essential to prevent hypos. It was recognised that there is little community awareness regarding diabetes and limited social support for children with diabetes and their families.

A highlight of the course was a meeting at UCH with a group of 8 children with T1DM and their mothers. The aim of this was to share our “consultation style”. With extra hospital staff present, there were over 80 people in the room. After an anxious start the children began to smile, the parents relaxed and started to talk, and by the end of the session parents had exchanged contact details and a parent lead support group was established! We are very hopeful that with support from health professionals, family groups will be able to sustain a meaningful interaction that will empower them to lobby for their rights for better, safer management and provision of care.

The course culminated with each of the 15 regional teams working independently to develop and then present to the group their goals and actions to improve diabetes care locally. These presentations included ideas for lobbying government agencies to increase funding for education, insulin supplies and complications screening; developing public awareness campaigns with the aim of destigmatising diabetes; organizing support groups for children and families; running local DIP courses and the development of local diabetes teams who will meet monthly. What they have

planned is ambitious, but witnessing their infectious enthusiasm and commitment gave me hope they will significantly advance the care of children with diabetes in Nigeria. ☐

On return to Lagos I ran a “mini” DIP for nurses and dietitians. In a more intimate environment we focused on practical issues of diabetes management such as hypo treatment, injection technique and insulin storage when no power is available (I learnt about clay pots and storage of insulin in cold water). Only two of the nurses had met a child with diabetes. Unsurprisingly therefore, they had little idea of diagnostic criteria, insulin administration or practical day to day care of children with diabetes, but after an intense day of education they seemed delighted to be better informed.

I left two days before World Diabetes Day and sadly missed two events in the cities of Lagos and Abakaliki which sounded very special. Dr. MaryAnn Ugochi Ibekwe had planned a celebration before the conference and at this announced the official “Kick off” of free insulin for all children with T1DM in Federal Teaching Hospital Abakaliki. On the bus trip back to Lagos, Associate Prof.Oduwole planned a diabetes walk. Prof. Zacharin, (who was still teaching the PETCWA course) joined the walk where 600 children at a local late primary and early secondary school listened quietly for an hour to explanations about “what is diabetes?” and what needs to be done to help affected children. The event included a little girl talking about her own experience with T1DM. Over 100 children then lined up to see what it felt like to have a blood glucose test, performed appropriately with sterile lancets by the local course fellows. On the walk 1,000 pamphlets were distributed to passers by, schools and pharmacies and next year’s plan is for 10,000 to be printed, along with broad television and radio coverage of the event. Only five days earlier a parent had told me “you don’t understand, you can’t talk about diabetes in Nigeria”, yet now it was already starting to happen. I was reminded of the words of the song by well known Australian singer-songwriter Paul Kelly “From little things, big things grow”.

An email sent to me after the course read “The course has brought the doctors and other healthcare professionals closer. The importance of teamwork has been further promoted by the group work and discussions. The course has strengthened the resolve of the attendees to generate data for Nigeria in Diabetes and Endocrinology. It was a great time of fellowship seeing everyone from different parts of the country since the centers are very far apart”.

On behalf of the international faculty , Associate Professor Oduwole and Dr. Jarret are thanked for their enthusiastic welcome and we remain grateful to the ever smiling Ayo for looking after us so carefully.

Incidentally just one question in the post course test was answered with 100% accuracy. “What does DEFG mean?” Here’s hoping they will always remember “Don’t Ever Forget Glucose”!

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1. Australian Bureau of Statistics June 2011
http://www.abs.gov.au/websitedbs/c311215.nsf/web/Regional+Statistics+-+Capital+Cities

2. WHO 2014 African Regions: Nigeria http://www.who.int/healthinfo/mortality_data/en/