

6th Joint EASD/ADA/IDF Advanced Clinical Postgraduate Course in the Management of Diabetes and its Complications

This conference was the sixth in a series run jointly by the EASD (European Association for the Study of Diabetes), the ADA (American Diabetes Association), and the IDF (International Diabetes Federation). The meetings allow local doctors who may otherwise find it difficult to attend international meetings to gain updated diabetes knowledge from a panel of expert lecturers.

The Addis Ababa meeting had 280 attendees, most of whom were from Ethiopia, but a significant minority were from various other parts of Africa. There were about 20 members of the teaching faculty, coming from various parts of Europe, the USA, and Africa. Teaching was delivered by a combination of lectures and workshops. The conference organisers included Professor Andrew Boulton (USA and UK), Professor Solomon Tesfaye (UK), and Dr Ahmed Reja (Ethiopia).

Running over 3 days, the programme was very full, and included the following topics:

- Epidemiology (general and African)
- Nature of type 2 diabetes
- Malnutrition-related diabetes (MRDM)
- Metabolic syndrome
- Childhood diabetes
- Diabetes in pregnancy
- Diabetes, HIV, and TB
- Screening and diagnosis
- Managing type 1 diabetes
- Managing type 2 diabetes
- Control monitoring
- Patient education
- Foot disease
- Neuropathy
- Neuropathy and hypertension

A selection of issues raised by the teaching sessions follows.



Diabetes in childhood

The increasing appearance of type 2 diabetes in adolescence and even childhood was discussed. This is occurring in Europe and America, and may well begin to appear in Africa in the future. The apparent scarcity of type 1 diabetes in childhood in Africa is of interest. This could be a real epidemiological curiosity, might be related to a 'survival effect' (with many patients dying

before presentation), or could be due to later age of onset (for which there is some evidence). Regardless of classification and epidemiological issues, all children with diabetes need family- and patient-centred care, with educational and psychological support.

Diabetes and hypertension

The many studies examining the effect of blood pressure (BP) lowering in type 2 diabetes were reviewed.

There is no doubt that BP lowering has major beneficial effects on cardiovascular events and death rates. The target we should be aiming for is uncertain – some recommend <140/80 mmHg and some <130/80 mmHg. One trial (ACCORD) has looked at very strict (<120/80 mmHg) versus standard (<140/80 mmHg) BP control in type 2 diabetes. Interestingly, there was no benefit in outcome with the strict BP control, and there was a significant increase in drug side-effects.

Diabetic pregnancy

With increasing rates of type 2 diabetes, also appearing at younger ages, the majority of diabetic pregnancies in Europe are now affecting type 2 patients – either newly diagnosed in pregnancy ('gestational diabetes mellitus' or GDM), or in pre-existing type 2 patients who become pregnant. This change in the spectrum of diabetic pregnancies is proceeding globally (including in Africa), though it is occurring more rapidly in the developed

Conference Report

world. Diagnostic criteria for GDM remain variable and debatable. Glycated haemoglobin (HbA_{1c}) is beginning to be used for the diagnosis of type 2 diabetes, but should not be used in pregnancy. Finally, there is now a good evidence-base for the use of metformin in GDM or pregnancy in known type 2 diabetes, if necessary in conjunction with insulin.

Painful neuropathy

Sensory neuropathy is one of the commonest diabetic complications, and when associated with pain can be very debilitating. Painful diabetic neuropathy affects about 16% of the diabetic population. Recent research suggests that its cause may be more complex than previously thought. The blood vessels in affected nerves are abnormal, with irregular walls and arterio-venous shunts. There are also central nervous system abnormalities, with reductions in spinal cord diameter, and blood flow abnormalities in the thalamus. Painful neuropathy is difficult to treat, and total pain relief is rarely possible. However, simple tricyclic drugs can be very helpful, as also (if available) can gabapentin, pregabalin, and duloxetine.

Risk factor treatment

There is much evidence that vigorous treatment of risk factors (e.g. hypertension, dyslipidaemia, smoking, etc.) in type 2 diabetes can improve cardiovascular outcome considerably – both in terms of morbidity and mortality. The effect of such intervention appears to be more beneficial than blood glucose lowering. Particularly helpful is a ‘combined attack’ on BP, lipids, smoking, and hyperglycaemia, possibly with added aspirin. There is, however, difficulty in knowing how far such studies can be extended to the African situation where large vessel disease (of the coronary, peripheral, and cerebral arteries) is much less common. Statin drugs are also expensive and not widely available. As a compromise it seems reasonable to treat hypertension ‘to targets’ in African type 2 diabetic patients.

Insulin treatment

Insulin is required of course for all type 1 patients, and for some with type 2 diabetes. Though delivery systems such as subcutaneous pumps, and four-times-daily injections, can be beneficial in specific patients, carefully used twice-daily systems can still achieve good results. This might be twice-daily isophane insulin in type 2 diabetes, or a twice-daily biphasic 30:70 mixture

(short acting:intermediate acting) in type 1 diabetes. Insulin costs and shortages remain a major problem in many parts of Africa, and one partial solution is to use the least expensive insulins. Even in Western countries, concerns are being expressed over the widespread use of ‘analogue’ insulins, in view of their high costs and relatively small benefits.

The diabetic foot

The importance of diabetic foot ulceration is that it frequently leads to amputation. The ‘Step by Step’ programme was discussed in detail by Dr Z. Abbas, the project head from Dar es Salaam, Tanzania. This programme has trained doctors, nurses and (more recently surgeons) to deliver team-based diabetic foot care and patient education. There are now 43 Diabetic Foot Clinics in Tanzania, and amputation rates have fallen significantly. The programme is also running in India, and is now being introduced in other African countries.

Other topics

Other issues discussed at the meeting included the interesting conditions of malnutrition-related diabetes mellitus and atypical ketosis-prone type 2 diabetes. The relationship between anti-retroviral drugs (ARVs) and type 2 diabetes is an important problem which may increase further the ‘diabetes epidemic’ in Africa. Urbanisation and epidemiological transition were discussed, as well as the emergence of coronary artery disease (CAD) in some urban environments. Care delivery in rural areas remains a problem, and a successful model of nurse-led delivery in South Africa was presented. This involved an active education programme, a well as oral agent titration by clinical algorithm.

Prof Geoff Gill, Editor, AJDM

