

International Diabetes Federation's 19th World Diabetes Congress

Cape Town, South Africa, 3–7 December 2006

Slowing diabetes progression: ADOPT rosiglitazone?

On the 4th December 2006, the results of the International ADOPT trial were presented at the International Diabetes Federation 19th *World Diabetes Congress* in Cape Town, South Africa, 3–7 December 2006.

Rosiglitazone, metformin and glyburide were compared for time to monotherapy failure. The 4360 people involved in the study were between 30 and 75 years old with a diagnosis of diabetes of less than 3 years who had been controlling their diabetes with lifestyle and diet modification only.

Rosiglitazone delayed the need for further drug therapy by 60 months, metformin delayed therapy by 45 months and glyburide by 33 months.

Steven Kahn, Associate Chief of Staff for Research at the Veterans Affairs Puget Sound Health Care System and Professor of Medicine at the University of Washington, Seattle, suggested that: 'Rosiglitazone's greater positive result was probably due to how effectively it improved the way the muscle, fat and liver respond to insulin, and how the β -cell in the pancreas releases insulin.'

The side effects were found to be: rosiglitazone caused fluid retention, oedema and, more importantly for people with

diabetes, weight gain. There was also an increased risk of fractures in women taking the drug, but not in men.

The complications related to metformin were mostly gastrointestinal effects, in particular diarrhoea. Glyburide caused more hypoglycaemic events than either of the other drugs, but had a lower risk of cardiovascular complications than rosiglitazone.

Giancarlo Viberti, Professor of Diabetes and Metabolic Medicine at the University of London said: 'This important trial provides clear evidence that one drug crucially maintains glycaemic control over a considerably longer period. But the potential risks and benefits, the side-effects and the costs of these three drugs should now all be considered by physicians and people with diabetes to help make the choice of therapy for type 2 diabetes' and that they communicate these pros and cons to their patient before deciding which drug should be used as the initial therapy for maintaining good blood glucose control.

People with type 2 diabetes need to be able to maintain good blood glucose control to reduce the risk of long term complications later in life.

Sitagliptin plus metformin equals lower blood glucose

At the meeting data was presented showing a significant mean reduction of 2.1% in HbA_{1c} when sitagliptin plus metformin was used as an initial therapy for people with type 2 diabetes.

When compared with metformin alone, twice as many people achieved the IDF's recommended HbA_{1c} target of <6.5% when using metformin and sitagliptin. Significant weight gain was not observed in any arm of the study.

In August 2006 sitagliptin became the first licensed DPP-4 inhibitor when it received approval for use in Mexico. The US FDA

approved the drug in October and it is now licensed for use in eight countries.

DPP-4 inhibitors or incretin enhancers enhance the ability of the body to lower blood glucose when it is elevated by two methods: firstly by triggering the pancreas to increase the release of insulin and secondly by signalling to the liver to stop producing glucose. This mechanism by which blood glucose is lowered by DPP-4 inhibitors is distinct from any other class of blood-sugar lowering agent currently licensed for use.

Vision loss is feared more than premature death in diabetes

The Lions Clubs International Foundation presented data at the IDF conference which showed that adults with diabetes are more concerned about blindness or loss of vision than any other diabetes-related complication.

The data was obtained from a telephone survey of over 1450 adults with diabetes in seven countries, including the UK and US. Between 40 and 50 per cent of adults surveyed said that vision loss was their greatest fear, compared to between 8 and 20 per cent who were more worried about premature death than

anything else.

Up to 91% of those surveyed knew that loss of vision was a complication of diabetes and felt that there were many emotional and psychological problems associated with it, such as loss of independence and depression.

Dr Ashok Mehta chairperson of the Lions Clubs International Foundation believes that, 'Given the devastating effects of vision loss, we must continue to raise awareness of preventative measures people with diabetes can take to delay or prevent this serious disease complication.'

A sweet song for rimonabant? SERENADE data presented

On the third day of the International Diabetes Federation 19th *World Diabetes Congress*, new data was presented that shows a cannabinoid receptor blocker, rimonabant, caused significant improvements in blood sugar and weight control in people with type 2 diabetes compared with placebo.

The Study Evaluating Rimonabant Efficacy in drug-NAive DiabEtic (SERENADE) study is the second study to show that rimonabant can significantly improve blood glucose levels in people with type 2 diabetes.

SERENADE involved 278 people across 56 study centres and seven countries. Those involved had to have a diagnosis of type 2 diabetes for at least 2 months but less than 3 years, an HbA_{1c} between 7 and 10% and not have received any oral diabetes medication for 6 months previously.

Over 50% of those on

rimonabant achieved the ADA recommended HbA_{1c} level of less than 7% over the 6-month trial period. Improvements were also seen in HDL-cholesterol levels and triglycerides.

These improvements in blood glucose levels were also accompanied by statistically significant reductions in body weight in those on rimonabant compared with placebo. The most common side effects experienced by those using rimonabant leading to discontinuation of therapy were nausea, depressed mood and paraesthesia.

'The management of type 2 diabetes should not only focus on controlling blood sugar levels but also improve other risk factors such as weight, good and bad cholesterol, triglycerides and blood pressure,' said Julio Rosenstock, Clinical Professor of Medicine at the University of Texas Southwestern Medical School.

Diabetes hit for six

While the IDF conference was in progress, the world-renowned Pakistani cricketer Wasim Akram travelled to Cape Town to watch a play performed by the children from the St Joseph's Home in Montana, Cape Town and to send a message to all South African children that diabetes can be conquered.

The staff from the St Joseph's Home take care of children from disadvantaged backgrounds who have long-term illnesses such as diabetes and HIV.

Wasim Akram was himself diagnosed with type 1 diabetes at the peak of his professional career in 1997, however, he managed to come back from the blow to captain Pakistan to the cricket world cup final in 1999. Since being diagnosed he has worked globally with the Accu-Chek brand to raise awareness of diabetes.

Akram spoke to the children about leading a disciplined and healthy lifestyle so that they could control their diabetes and lead a full and active life.

Other meetings

The Diabetes in the South Asian Diaspora Conference, held at the Royal College of Physicians, London, on 21 February 2007 was welcomed by Dr Kiran Patel, Chairman of Trustees of the South Asian Health Foundation (SAHF), who explained the role of the SAHF in raising awareness of health issues in this community.

The immediate challenge is the epidemic of type 2 diabetes. The number of South Asians with this condition is astounding and has a major impact on the health economics and social milieu of many countries. This conference was organised in order to facilitate the development of diabetes management in South Asian countries and of that population in the UK.

In the first session of the meeting, Professor Yajnik from India and Professor Tuomilehto talked about the epidemiology of South Asians and that the problems of diabetes start at the foetal level. Professor Yajnik explored the concept of a 'thin-fat Indian', that people of Indian origin had the wrong distribution of fat, which increased their risk factors despite being thin. Professor Tuomilehto explained that the lifetime risk of a South Asian to have diabetes is 50% and the average age at which this population gets diabetes is 10 years before that of Caucasians.

The effect of the South Asian diet on the causation of diabetes has not been studied and Dr Nita Forouhi insisted that such a study should be planned. Professor Raj Bhopal explained a large study looking at prevention of diabetes in South Asians by

simple lifestyle measures.

Professor Tony Barnett from Birmingham presented the results of the United Kingdom Asian Diabetes Study (UKADS). He also mentioned that there remain major inequalities in the health needs of South Asians and the baseline data from the UKADS study showed this. He also mentioned that a culturally sensitive healthcare delivery system, like UKADS, helps to improve their outcomes in terms of the blood pressure and cholesterol management.

In the afternoon sessions, the management of complications of diabetes in South Asians was explored by a list of eminent speakers, such as Dr Jiten Vora, Dr Paul O'Hare, Professor Melanie Davies, Dr Anthony Wierzbicki and Professor Kennedy Cruickshank.

The last aspect of this meeting looked at delivering a culturally sensitive health care system. Dr Shirine Boardman talked about the 'Apnee Sehat' model of health care that is being delivered in Leamington Spa to try and change the attitude of the community. Dr Wasim Hanif looked at managing diabetes during the month of Ramadan which has a huge impact on Muslims. Dr Kamlesh Khunti mentioned the importance of providing diabetes education.

The conference was closed by Dr Kamran Abbasi, who mentioned that the proceedings of the conference will be formally published, and may be used for the planning of future care plans for management of diabetes in South Asians.