

PCDS

Primary Care Diabetes Society

The latest news and views from the Primary Care Diabetes Society

Report from the 70th Scientific Sessions of the American Diabetes Association

Orlando, Florida, 25–9 June 2010



*Alia Gilani is
Health Inequalities
Pharmacist, NHS
Glasgow and PCDS
Committee Member.*

The city of Orlando, Florida, played host to the 70th Scientific Sessions of the American Diabetes Association (ADA), where approximately 17 000 people attended. The conference was set off by the opening ceremony in spectacular style at Disney World's Epcot park, where guests were treated to a stunning firework display and a chance to experience a few of the rides that the parks are renowned for.

The ADA President's address emphasised person-centred care as the key to successfully

managing the diabetes epidemic.

The contentious issue of using HbA_{1c} as a diagnostic tool was again discussed. Advantages include not requiring a fasting sample for diagnosis and less biological variability than the current diagnostic method of fasting glucose and oral glucose tolerance testing. Many factors cause error in HbA_{1c} readings, however, such as ethnic variation, haemoglobinopathies and anaemia. The cost implications for the change in diagnosis will influence whether the change comes to fruition. In terms of targeting individuals at risk of diabetes it was proposed to have tiers of risk factors, from low to high to target and refine ways of diagnosis. The session concluded that HbA_{1c} is not an adequate diagnosis for all people and consistency among multiple tests and symptoms is the best confirmation of a true result.

A new class of drug named selective sodium-glucose cotransporter-2 (SGLT-2) inhibitors were introduced at the conference. The drug works by preventing reabsorption of glucose in the renal tubules, promoting glucose excretion and thus lowering blood glucose levels. The results from a phase III multi-centre randomised controlled trial were presented. A total of 546 individuals on metformin with inadequate glycaemic control were randomly allocated to either the SGLT-2 inhibitor dapagliflozin or placebo. At 6 months there was a greater reduction in HbA_{1c} and weight loss in the study group (Parikh et al, 2010). Within the same class of drug is canagliflozin, which is currently undergoing phase III studies in the USA. There is potential for this new class of drug to promote weight

loss and improve glycaemic control. There are, however, issues that need to be addressed through further investigation, for example the impact of SGLT-2 inhibitors on renal function and the possible increased risk of genital infection.

Studies have shown a favourable cardiovascular (CV) risk profile with glucagon-like peptide-1 (GLP-1) receptor agonists. The DURATION-2 study (Bergenstal et al, 2010) showed a reduction in HbA_{1c} in those treated with exenatide once-weekly compared with sitagliptin or pioglitazone. The DURATION-3 study (Diamant et al, 2010) compared exenatide once-weekly with insulin glargine and showed a greater reduction in HbA_{1c} with the former. In addition, the newer long-acting GLP-1 receptor agonists – taspoglutide and albiglutide, which are currently undergoing studies – show promise with a lower incidence of nausea compared with current drugs in the same class. Although the GLP-1 receptor agonists show a favourable CV risk profile, more data are required to show how this leads to CV benefits. The US Food and Drug Administration is carrying out a long-term surveillance programme on GLP-1 receptor agonists due to the development of C-cell carcinoma found in rats, although no cases have developed in humans taking either exenatide or liraglutide.

A future once-daily basal insulin was also introduced – degludec – which is undergoing phase II studies and shows potential with a lower incidence of episodes of hypoglycaemia compared with current insulins in the same class (Novo Nordisk, 2010).

The dipeptidyl peptidase-4 inhibitors were discussed in terms of future potential in replacing sulphonylureas. It was proposed this could be the case when the pricing improves and there are more long-term data. ■

Bergenstal R, Wysham C, MacConell L et al (2010) Efficacy and safety of exenatide once weekly versus sitagliptin or pioglitazone as an adjunct to metformin for treatment of type 2 diabetes (DURATION-2): A randomised trial. *Lancet* **376**: 431–9

Diamant M, Van Gaal L, Stranks S et al (2010) Once weekly exenatide compared with insulin glargine titrated to target in patients with type 2 diabetes (DURATION-3): An open-label randomised trial. *Lancet* **375**: 2234–43

Novo Nordisk (2010) Press release: Phase 2 data for ultra-long-acting insulin degludec show the potential to effectively lower blood sugar, including when used three times a week. Novo Nordisk Inc., Princeton, NJ

Parikh S, Sugg J, Ying L, List JF (2010) Dapagliflozin: An effective treatment option in patients with type 2 diabetes across stages of disease. *American Diabetes Association 70th Scientific Sessions*, Orlando, Florida, 25–9 June