Notes from the Diabetes UK conference

DIABETES UK
KNOW DIABETES. FIGHT DIABETES.

From the desk of the Honorary Meeting Secretary of ABCD, Dr Umesh Dashora

It was a pleasure to attend the Diabetes UK (DUK) conference between 27th March and 1st April, 2022 virtually. Here, to stimulate interest, discussion and further reading, are the points that I thought were either important or new for me. I hope you will enjoy these as top tips from DUK and that you will read the relevant papers or guidelines in full if these points interest you. These are my recollections, and they may be biased, but they can still serve as a starting point to stimulate your interest. Additional information may be found in the papers and links given here.

Finererone

Finererone is a selective mineralocorticoid receptor antagonist (MRA) compared to spironolactone and eplerenone, with low risk of hyperkalaemia compared to non-selective MRAs. It should be added to ACEIs/ARBs to help reduce the progression of kidney disease and adverse cardiovascular outcomes. Additional information can be found in the following papers:

- Zheng Y, Ma S, Huang Q *et al*. Meta-analysis of the efficacy and safety of finerenone in diabetic kidney disease. *Kidney Blood Pressure Res* 2022 Jan 14;**47**:219-228. https://doi.org/10.11159/000521908
- Agarwal R, Filippatos G, Pitt B *et al*. Cardiovascular and kidney outcomes with finerenone in patients with type 2 diabetes and chronic kidney disease: the FIDELITY pooled analysis. *Eur Heart J* 2022 Feb 7;**43**(6):474-84. https://doi.org/10.1093/eurheartj/ehab777
- DeFronzo RA, Bakris GL. Modifying chronic kidney disease progression with the mineralocorticoid receptor antagonist finerenone in patients with type 2 diabetes. *Diabetes, Obesity and Metabolism* 2022 Apr 18;**24**(7):1197-205. https://doi.org/10.1111/dom.14696

Blindness

Diabetes is no longer the leading cause of blindness due to advances in treatment like anti-VEGF injections for diabetic macular oedema. Other treatments are in the pipeline such as fully human antibody therapy.

Mortality

In people with T2DM mortality from CVD is reducing but mortality from liver disease, cancers and infections is increasing.

Closed-loop systems

These are being tried, and may help. The NHS is starting a pilot.

Non-alcoholic fatty liver disease (NAFLD)

- Try doing a biochemical marker such as ELF
- Ultrasound with fibroscan can pick up NAFLD-related fibrosis
- The incidence of NAFLD is high. Pioglitazone and GLP agonists might be helpful. The evidence for improvement with SGLT2 inhibitors is not clear yet
- Dietary fructose can cause NAFLD
- GDF-15 may be responsible for fibrosis
- Mantovani A, Dalbeni A. Recent developments in NAFLD. *Int J Molecular Sci* 2022 Mar 7;**23**(2):2882. https://doi.org/103390/ijms23052882

Phenotypes

Diabetes is of five different phenotypes, not just type 1 and type 2. Some people with type 2 diabetes may be insulin-deficient. Others with type 2 may be insulin-resistant, obese, and it may be age-related. The approach to treatment will differ according to the phenotype. Beta cell dysfunction is an essential part of type 2 diabetes.

Lyumjev insulin

- Can improve post-prandial control and time-in-range versus comparator, and may help development of completely closed-loop systems when it is used in pumps
- Post-prandial control may be faster
- May not need a pre-bolus
- People should not be anxious if their glucose drops quickly when using Lyumjev

Flash Libre

A Flash Libre trial shows RCT evidence for Libre versus self-monitoring of blood glucose (SMBG), with a greater reduction in HbA_{1c}.

Pumps

Patch pump and Pod therapy pumps may become more popular.

Bolus news

- The basal bolus proportion may change with greater use of ultrafast-acting insulin
- Bolus as you eat (rather than 20 minutes before) with Lyumjev

Foot ulcers

UrgoStart dressings are now recommended by NICE. LeucoPatch and placental membrane products (Grafix) may be useful in some other people. UrgoStart for treating diabetic foot ulcers and leg ulcers NICE MTG42, published January 2019.

Fats

Saturated fats in foods such as yogurt might be good for people with diabetes but if in foods like red meat they may increase cardiovascular risk.

T1DM

Grade 4 evidence: adjust insulin for CH content.

T2DM

Mediterranean diet, low energy, low carbohydrate, low fat diets are better.

CVD risk reduction

Mediterranean diet has good evidence.

Remission of diabetes

Aim for 15kg weight loss; individualise.

CVD risk reduction in T2DM

- Lipid lowering of TC<3, LDL<1.4 should be attempted (or 50% reduction) for people with very high risk of cardiovascular events. The lower the better.
- LDL: start with statins, increase them to

the maximum dose. Add ezetimibe (which is cheap and well tolerated). Add bempedoic acid and PCSK9 inhibitors/ inclisiran
- TG: high-dose Icosapent Ethyl intervention trial (purified EPA) will reduce CVA by nearly 30% in patients already on statins and with TG level above 1.69 mmol/L, as shown by the REDUCE-IT and JELIS trials. Reduction of cardiovascular events with Icosapent Ethyl Intervention Trial – REDUCE-IT. American College of Cardiology, acc.org. Updated Gaba P, Bhatt DL, Steg PG *et al*. *J Am Coll Cardiol* 2022;**79**: 1660-71.

Technology assistants

Diabetes technology assistants for the diabetes team can help the rest of the team to concentrate on clinical aspects. Diabetes inpatient healthcare assistants and weekend diabetes reviews will also improve outcomes. SystmOne can help join up tasking between primary and secondary care.

Children

25% of children with type 1 DM present with DKA but screening has the potential to reduce this.

Flash monitoring

More than 45% of people with type 1 DM are using flash monitoring.

Amputations

Amputation rates in the UK vary from one CCG to another, from 3.5 to 16 per 10,000 patient years. Rates have increased in 20 CCGs over time.

Diabetes: some statistics

- Prevalence is about 7%
- Complications account for 80% of yearly expenditure on diabetes
- Diabetes accounts for 10% of the NHS budget. £10 billion a year goes towards diabetes, amounting to £1 million an hour
- Diabetes medicine costs are 12% of the NHS medicines budget
- £5.5 billion a year are spent on hospital care of diabetes
- £3 billion a year could be saved if hospital use of medicine were appropriate

Budgeting issues

- The NHS budget is likely to be flat for the next 5 years so responsible use of resources is a must
- CGMS can save money for the NHS compared to SMBG
- Flash UK showed low QALYs gained (£5,000 versus £20,000 as a cutoff) for type 1 diabetes
- Use of CGMS may also become cost-effective for type 2 diabetes as the market matures. It is now recommended by NICE for some groups

New NICE guidelines

The new NICE guidelines recommend that:

- All adults with type 1 diabetes should have access to either Flash or CGM
- All children with type 1 diabetes should have access to CGM
- Some people with type 2 diabetes who use insulin intensive therapy (four or more injections per day) should have access to Flash. For example, those who experience recurrent or severe hypos, those with a disability that means they cannot finger-prick test or those who would otherwise be advised to test eight or more times a day
- The health system should address the existing inequalities in access to Flash and CGM
- A QRISK of 10% dictates the use of SGLT inhibitors in type 2 DM. Lifetime risk should also be taken into account
- GLP-1 agonists did not reach the QALY threshold to be considered as second-line therapy

Saving money

We have to save money somewhere.

- Biosimilar insulins can save 20%
- Overuse of medicines in those aged over 75, such as addition of DPP4i to GLP-1 agonists and insulin use with DPP4i, should be reviewed
- Avoid leaving insulin in hospital when patients go home
- Involve the pharmacist to help reduce wastage

Other points

- The use of GLP-1 agonists is variable across the country, for unknown reasons
- Dual and triple agonists, PYY and treatments for NASH may change the patterns of disease
- HCA-driven practices had nearly 100% completion of diabetes-related processes and also had the highest achievement of three targets in a recent NHS study
- Predicting outcomes and then planning interventions at system level and at individual level can help improve outcome and behaviour
- JITAI (just in time adaptive intervention) to improve outcome should be considered by the team. Examples include nudging appropriately with text messages, with some reward or value attached to the action
- Weight loss with tirzepatide 15mg can be 12.4kg (13%), with a HbA_{1c} reduction of 2.46%
- A semaglutide 2.4mg once-weekly injection can reduce weight by about 15kg (12% more than placebo)

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