A brief review of the 60th Annual Meeting of the EASD 2024

Highlights of the European Association for the Study of Diabetes meeting, Madrid, Spain, 9th-13th September

Introduction

In September 2024 Madrid hosted the 60th annual EASD meeting. Registration was its highest (n=12,949) since in-person meeting were re-introduced post-covid, but still >15% lower than pre-pandemic. Nevertheless, the UK again ranked 4th out of the 127 countries represented. Interestingly, only 1,221 registrants were virtual-only attendees: a far cry from the >20,000 people from 141 countries who logged-in to the virtual-only meetings in 2020.

This review is slanted towards novel weight and blood glucose reducing peptides, because this was a dominant theme of the meeting which is also of poplular media interest.

Peptide analogues

And so, incretins. With regard to the older glucagon-like peptide-1 receptor agonists (GLP-1RA) (can we call them "classical" yet?), interest focused on renal outcomes, with data cuts from outcomes trials such as FLOW and SELECT (both using semaglutide). There were various data cuts from phase 3 trials with tirzepatide (a GLP-1/gastric inhibitory peptide [GIP] agonist) and phase 2 trials with retatrutide (a GLP-1/GIP/glucagon triple agonist). Meanwhile, the blizzard of new incretin peptides continues. As well as a clutch of new GLP-1 and GLP-1/GIP agonists, we saw early data on GLP-1/glucagon agonists (survodutide, mazdutide, pemvidutide), a GLP-1/GLP-2 agonist (dapiglutide) and a GLP-1/fibroblast growth factor (FGF)21 agonist (ZT003).

Do these additional mechanisms help? Last year, in Hamburg, Professor Jens Holst (a giant in this field for decades) argued (persuasively, given the evidence at the time) that there really was little evidence that the GIP component of tirzepatide adds to its efficacy in humans, and it may even hinder it (the "superagonist" action of this agent at the GLP-1 receptor may have explained its effects). Our understanding took a step forward this year, as we had studies confirming that GIP receptor stimulation, alongside GLP-1 receptor stimulation, very probably does contribute to weight loss in humans. Also, the low level of glucagon receptor activation in drugs such as retatrutide does seem to oppose the reduced energy expenditure during weight loss, again leading to greater efficacy.

Younger readers may not remember when amylin was first the centre of attention, back in the 1990s. The noughties saw a resurgence of interest. Now, amylin is back with a bang, with its own official symposium and research communications. The interest is once again driven by its potential for weight management, since adding an amylin analogue to a GLP-1RA gives significant extra weight loss. Accordingly, we saw new research (generally preclinical or early-phase clinical studies) on amylin agonists (or dual amylin-calcitonin receptor agonists), including combinations of amylins (petrelintide or cagrilintide) with incretin peptides (semaglutide or tirzepatide), and even a tetra-valent single peptide (GLP-1, GIP, amylin, calcitonin). CagriSema (cagrilintide + semaglutide) seems to be in the lead here, and a single-peptide GLP-1/amylin agonist (amycretin, orally available via the same absorption enhancer used for oral semaglutide) is also in the pipeline. Amylin-containing treatments can potentially deliver better preservation of lean vs. fat mass during weight loss. This observation is driving discussion of the quality as opposed to the quantity of iatrogenic weight loss. We need more clinical data to see to what extent this is a genuine therapeutic phenomenon.

What we did not see, apart from routine mentions in summary slides, was progress in how to apply these new medicines in the long term. Discontinuation from incretins is common and their effects on weight reverse rapidly when withdrawn. The development of an evidence base to support the inevitable transition away from these agents does not seem to be in sight.

Longer or together is better

Many of the new peptides require weekly, or less frequent, delivery. Semaglutide is going generic/biosimilar and at least one monthly formulation is on the way (it remains to be seen whether it is easier to forget to take your medicine every month, as opposed to every week). A number of presentations featured icodec, the first once-weekly basal insulin (unsurprisingly being developed as a fixed-ratio combination with semaglutide).

There was relatively little new research on sodium-glucose co-transporter-2 (SGLT2) inhibitors, apart from potential benefits of combining them with GLP-1RA. According to presentations given here, these two drug classes do seem to exert complementary actions to an extent, e.g. preservation of estimated glomerular filtration rate (eGFR) with SGLT2i and reduction of albuminuria with GLP-1RA. One study from the US described reductions in the rate of eGFR decline at the population level that coincided with the introduction of these agents, though your reporter struggled to reconcile this with the many reports of their limited use in populations indicated for them.

Diabetes prevention

Prevention of diabetes beats even the best multi-agonist peptide given after the fact. Debate over the benefits,

Table 1. EASD award lectures 2024[3]

Prize	Lecturer	Title
56th Claude Bernard Lecture	Roy Taylor MBE UK	The aetiology of T2DM: an experimental medicine odyssey
39th Camillo Golgi Lecture	Rodica Pop-Busui USA	It's complicated: using lessons from the past and the knowledge of the present to build a future free of diabetes complications
18th Albert Renold Lecture	Lori Sussel USA	Regulation of islet cell lineages in health and diabetes
59th Minkowski Lecture	Elisa De Franco UK	Finding the missing pieces of the puzzle: gene discovery in neonatal diabetes to gain new insights into beta cell biology
Diabetes Prize for Excellence Lecture	Juleen R Zierath Sweden	Deconvoluting signals and metabolic rhythmicity of insulin and exercise action in T2DM

methodology and cost-effectiveness of screening for prediabetes/diabetes continues. A report from ADDITION-Cambridge found that the overall programme did not impact population-level mortality among those offered screening (and offering screening may have brought other harms). This study (and EUROASPIRE data) suggested that populations that actually underwent screening derived benefit. In addition, there was considerable research interest this year on predicting, promoting and managing remission of type 2 diabetes (T2DM). Again, much of this research was inspired by our new-found ability to induce substantial weight loss in people with overweight or obesity, with potential for remission of relatively new-onset T2DM.

In conclusion

It is customary to acknowledge the EASD's award winners: these, and their fields, are summarised in Table 1.

Honours this year included the UK's Professor Roy Taylor, for his contribution in advancing our understanding of why people get diabetes from the population to the individual level, and Dr Elisa De Franco for her work unravelling the mysteries of the beta cell.

That's it from EASD 2024. Watch this space for news from EASD 2025, to be held September 16–19th in Vienna.

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