

Reflections from IDF 2017



Dr Caroline Day reports from the International Diabetes Federation Congress in Abu Dhabi, United Arab Emirates, 4–8 December 2017

Introduction

The Abu Dhabi National Exhibition Centre (ADNEC) hosted more than 7,500 participants from 182 countries at the International Diabetes Federation (IDF) biannual World Congress. ADNEC was easy to navigate but readily permitted achievement of a daily step target and offered good access to winter sunshine and fresh air – if you could get upwind of the smokers. The Leaning Tower of Abu Dhabi (aka Capital Gate Tower) at one end of the exhibition centre is home to a Hyatt hotel and office complex. It is the first building in the world to have a pre-cambered core, it has a diagrid exoskeleton structure obviating the need for conventional internal support structures and permitting improved efficiency of double glazing systems, no two rooms are identical, each pane of its low emissivity façade glass and every interior angle is different (individualisation?). This iconic 525 ft (160 m) high tower has a gravity-defying westward lean of 18°, making it the world's furthest leaning man-made tower. This meeting permitted simultaneous exposure to novel engineering underpinning futuristic architecture and opportunity to enhance knowledge to support better diabetes care.

Satellites and sessions

The 20 satellite symposia (listed online) covered a range of topical issues throughout the meeting.¹ The main scientific programme commenced on 5 December and incorporated 17 sessions dedicated to IDF initiatives, including the award lectures (Table 1) and launch of the IDF Diabetes Atlas (Abstracts 220–222).^{1,2} Joseph Wolsdorf (USA) delivered the ISPAD lecture 'Trials of the postpubertal period' (Abstract 159). The scientific programme, delivered across eight parallel sessions, was awarded 25 European CME credits – certificates available via delegate's conference profile.¹ Accessing the full scientific programme provides links to full session content with abstract numbers plus links to speaker and chair biographies.¹ Abstracts (n=1,522) of almost all presentations (including invited speakers) can be accessed via the conference website

Table 1 IDF award lectures

IDF award lectures (Abstract No)	Awardee	Title
Joseph P Hoet Lecture (Abstract 388)	Mr Douglas Villarroel, Bolivia	Prevention and treatment of diabetes in rural areas: a colossal challenge
Robin D Lawrence Lecture (awarded to outgoing IDF president)	Dr Shaukat M Sadikot, India	Education is empowering
Education and integrated care (Abstract 123)	Professor Yokato Seino, Japan	Exploring diversity of diabetes, science-navigated care and education
Diabetes in women and children (Abstract 283)	Professor Boyd E Metzger, USA	The global epidemic of diabetes: special concerns for mothers and children
Diabetes in society and culture (Abstract 298)	Mr Stéphane Besançon, Mali	The need for understanding society and culture in responding to diabetes: the experience of Santé Diabète in Mali
Science of diabetic complications (Abstract 284)	Professor Mark Cooper, Australia	Pathogenesis of micro and macrovascular complications are there common pathways for both?
Basic and clinical science (Abstract 337)	Professor Robert R Henry, USA	Cardiovascular benefits of novel therapies for type 2 diabetes: GLP-1 receptor agonists and SGLT2 inhibitors
Epidemiology and public health (Abstract 234)	Dr Mahmoud Ibrahim, USA	Diabetes in the Arab countries – can it be more than an epidemic?
Living with diabetes (Abstract 432)	Mr Sung-won Kim, Korea	Living with diabetes

and they are conveniently sectioned for viewing via their session of presentation. About 65% of the abstracts submitted for the meeting were included in the programme: 974 as posters and 252 as oral poster presentations. Armchair perusal of all 1,226 posters is also possible, with posters viewable within the sections in which they were displayed and individually.¹

Highlights

There were many excellent presentations providing updates, new perspectives and novel insights to new and old issues whilst reiterating the fundamental challenges to be addressed in order to improve outcomes

for people with diabetes. A satellite symposium to launch the declaration 'Strengthening health systems to manage diabetic eye disease: integrated care for diabetes and eye health' sadly showed failures to address these basic issues and highlighted the hurdles encountered by patients and eye specialists.³ The declaration calls for primary healthcare providers to integrate eye health within routine diabetes care and for improved collaboration across diabetes and eye health sectors and support for patient-centred care approaches for diabetic eye health. The Fred Hollows Foundation announced provision of eye health material at IDF 2015 and this, as well as the IDF 2017

guidelines for treatment of type 2 diabetes in primary care, is available on the IDF website.^{4,5} Online support is available, but how do we get from screen to deed (Abstracts 116–118, 138–140, 212)?

DISCOVER (DISCOVERing treatment reality of type 2 diabetes in real world settings, NCT02322762) is a 3-year observational, prospective, longitudinal cohort study being conducted in 37 countries which will describe disease management patterns and clinical evolution in about 14,000 type 2 diabetes patients who are starting a second-line glucose-lowering agent (Abstracts 186–191). At baseline, patients had a mean age of 56.6 years, BMI 29.6 kg/m², HbA_{1c} 8.4% (68.3 mmol/mol) and many patients were reported to have hypertension (51.1%) and hyperlipidaemia (43.7%). Metformin monotherapy was the most commonly prescribed first-line treatment. Subjects are being treated across a range of sites (41.8% primary care centres, 19.9% university/teaching hospitals, 10.5% specialist diabetes centres) and the study is expected to complete by the end of June 2019. J-DISCOVER, NCT02226822, the version of the study being undertaken in about 2,000 patients in Japan, is expected to complete by the end of 2018.

DiRECT (Diabetes REmission Clinical Trial, ISRCTN03267836) is a cluster-randomised controlled trial in 49 UK primary care centres in which patients with type 2 diabetes were assigned to usual care alone (n=149) or with a validated weight loss programme (n=149) which included a very low energy meal replacement diet (825–853 kcal/day for 3–5 months) followed by gradual food re-introduction over 2–8 weeks and maintenance of weight loss for at least 24 months (Abstracts 192–194).⁶ At baseline the mean age was 54 years, duration of diabetes was 3 years, BMI was 34–35 (27–45) kg/m² and HbA_{1c} was 7.7% (61 mmol/mol) and blood pressure 135/85 mmHg. After a year on the programme, 46% of the subjects versus 4% in the usual care group were in remission: 86% of people who lost >15 kg were in remission, as were 57% of people who lost 10–15 kg and 34% who lost 5–10 kg. Remission was defined as HbA_{1c} <6.5% (<48 mmol/mol) and ≤2 months without glucose lowering drugs). DiRECT has clinically confirmed pathophysiological changes which can lead to diabetes remission – provided adequate beta-cell function is still available. Loss of intra-organ fat particularly reduces hepatic insulin resistance and permits a return to normal pancreatic function including beta-cell differentiation

Figure 1. Bible quotation (Good News Translation)*

Listen, my child, be wise and give serious thought to the way you live. Don't associate with people who drink too much wine or stuff themselves with food. Drunkards and gluttons will be reduced to poverty. If all you do is eat and sleep, you will soon be wearing rags.

Proverbs 23:19-21

* This quotation is from the book of Proverbs in the Old Testament and is attributed to King Solomon (the Wise) who reigned for about 40 years (from ~970 to 931 BC) in the 10th century BC.

and an acute insulin response to food. This trial is expected to complete at the end of September 2018.

Selecting the optimal diet for people with diabetes and diabetes remains debatable (Abstracts 214–216, 223, 224), as does bariatric surgery in diabetes (Abstracts 237–239) and the role of the microbiome (Abstracts 124–126). Novel pharmacological approaches and new data on established treatments were presented (Abstracts 1–3, 135–137, 163, 164, 181, 182, 337, 367–369, 389–391, OP 0007–15, OP 0090–95, OP 0103–7, OP 168–174, OP 0237).

Further interrogation of results and new statistical analyses from the cardiovascular (CV) outcome trials DEVOTE (Abstracts 288–291), EXSCEL (Abstract 293) and ACE (Abstract 294) provided new insights to these studies. The impact of prediabetes on macrovascular disease was discussed (Abstracts 267 and 268), and although CV disease is the leading cause of disability and death in people with type 2 diabetes, interim results of the IDF 'Taking Diabetes to Heart' survey (www.idf.org/takingdiabetes2heart/survey) showed that one in three respondents considered themselves to be at low CV risk, one in six had never discussed CV risk with a healthcare professional and 26% were unaware of any association between type 2 diabetes and CV risk. If only "What the mind doesn't know the heart doesn't grieve" applied to type 2 diabetes.

Diabetes and beliefs were considered (Abstracts 404–406) and an open forum in the Diabetes in Society and Culture track hosted a session on the use of religion and philosophy to promote diabetes care. It was agreed that it was useful to get community religious leaders to convey the same messages as healthcare professionals, and it was noted that popular practices which are considered non-religious, such as mindfulness, could also support diabetes wellbeing. The potential role of religion as an adjunctive diabetes therapy

was exemplified by quotations from a plethora of world belief systems (for example, Figure 1). All the religions cited – there were many – offered quotations which exalted moderation in eating and drinking plus avoidance of hedonism and idleness. Are diabetes prevention programmes simply reinventing the wheel?

IDF 2019

If a trip to the East beckons, put 2–6 December 2019 in your diary and attend the IDF Congress at the Busan Exhibition & Convention Center (BEXCO) in South Korea. It should be dry and sunny, but chilly with an average December temperature of 6°C.

References

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