

Diabetes Symposium

A symposium held on 7 October 2011 at the Royal College of Physicians of Edinburgh

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A sharp increase in the global prevalence of diabetes has recently been reported, with the number of people diagnosed estimated as 347 million.¹ In this context the RCPE president, Dr Neil Dewhurst, opened the symposium by reminding the audience of the huge cost of treating people with diabetes to the National Health Service – a million pounds an hour.

DIABETES THERAPIES – PAST, PRESENT AND THE FUTURE

A number of newer therapies have recently been added to the diabetologists' armamentarium. The symposium devoted the opening session to the history of pharmaceutical therapy for hyperglycaemia. Professor Ian Campbell (Emeritus Professor of Medicine, University of St Andrews) set the scene by outlining the history of current medications in diabetes and pointing out that metformin, the bedrock of modern type 2 diabetes therapy, was nearly consigned to history due to concerns over its safety.

Professor Steven Gough (Professor of Diabetes, OCDEM, Oxford) gave an overview of novel diabetes therapies. The secretion of insulin is impaired in type 2 diabetes and incretin mimetic therapies can improve glucose control. Professor Gough also discussed clinical trials of a new class of drugs – SGLT2 inhibitors that promote glycosuria – and highlighted the need to be vigilant about the potential increase in urinary tract infections associated with their use. Professor Clifford Bailey (Professor of Clinical Science, Aston University, Birmingham) investigated novel therapies currently undergoing proof-of-concept or early-phase trials. He also reviewed therapies licensed outside Europe, such as bromocriptine.

PREDICTING RESPONSE TO DIABETES THERAPIES

Dr Ewan Pearson (Senior Lecturer, Ninewells Hospital and Medical School, Dundee) reminded the audience that type 2 diabetes is a heterogeneous disease. He explained how a response prediction tool that integrated

phenotypic information with the patient's genotype could help in selecting glucose lowering therapies and illustrated this concept with his own research on sulphonylurea sensitivity.²

SYDNEY WATSON SMITH LECTURE

Professor Edwin Gale (Emeritus Professor of Diabetes, University of Bristol) gave a critical and perceptive overview of the rising cost of therapies for diabetes.³ In an era of austerity where most countries are facing economic pressure, he outlined how adhering to guidance from organisations such as the National Institute for Health and Clinical Excellence (NICE) could save resources. He also highlighted the relative lack of competition in the global insulin market and issued a call for buyers across Europe to jointly negotiate lower prices.

DIABETES IN SPECIAL GROUPS AND SITUATIONS

Professor Donald Pearson (Consultant Physician, Aberdeen Royal Infirmary) reminded the audience that the risks to the mother and baby increased with elevation of glucose levels in pregnancy. He also highlighted the year-on-year increase in the number of Scottish women with type 2 diabetes giving birth. Dr Sue Benbow (Consultant Physician, Aintree Hospitals, Liverpool) highlighted the high prevalence of diabetes among individuals in residential homes and how these individuals were often missed out by retinopathy screening and other regular tests. A number of factors including poor matching of meal times and diabetes therapies encouraged poor control and hypoglycaemia in these institutionalised individuals.⁴ Similar factors also affect the quality of care for patients in hospital. Professor David Kerr (Consultant Physician, Royal Bournemouth Hospital, Bournemouth) noted that dedicated inpatient nurse specialists decreased the length of hospital stay, while simplified insulin prescription regimens had the potential to improve the accuracy of prescriptions.

COMPLICATIONS OF DIABETES

Although the number of people with type 1 diabetes has increased, the number of patients commencing renal replacement therapy has levelled out. Professor Sally Marshall (Professor of Diabetes, Newcastle University) suggested that modern therapy is delaying the onset and/or progression of renal complications. Professor Peter Hayes (Professor of Hepatology, University of Edinburgh) alerted the audience to the risk of 'fatty liver' progressing to cirrhosis and hepatocellular carcinoma if liver markers are not monitored periodically in patients with type 2 diabetes. The symposium closed with an overview of the pathogenesis of painful diabetic neuropathy. Professor Solomon Tesfaye (Consultant Physician, Sheffield) believes that current clinical tools are not adequately sensitive in identifying mild to moderate neuropathy.⁵ He also highlighted the complexities of the central pain processing pathways and the considerable inter-individual variation in pain threshold. He also raised awareness of the recent NICE guidelines recommending duloxetine as the first-line therapy for painful diabetic neuropathy.

TAKE-HOME MESSAGE

Despite the proliferation of generic guidelines, most speakers at the symposium highlighted the need to individualise glucose-lowering therapy, weighing the risks and benefits. Many speakers also discussed the need to view glycaemic control as part of a wider multi-pronged strategy to reduce cardiovascular risk.

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