Letter

DOI: 10.1111/dme.13852

Changing the care pathway for Type 2 diabetes at the time of diagnosis: the role of the multidisciplinary team

Diabet. Med. 36, 653-654 (2019)

Conventionally, specialists become involved in the later stages of Type 2 diabetes mellitus, whereas evidence supports the role of time-limited specialist input at the start of the treatment journey [1]. The diagnosis of Type 2 diabetes should be seen as a key opportunity for multidisciplinary teams to intensify therapy aimed at quickly correcting underlying metabolic dysfunction.

Insulin resistance can precede diabetes for a decade [2], during which time β -cell dysfunction and a higher cardiovascular risk have accrued [2]. Over half of people with newly diagnosed Type 2 diabetes have evidence of diabetesrelated tissue damage [3]; therefore, by the time of diagnosis, many years of metabolic dysfunction may have elapsed. Further treatment delay, in the belief that the condition is 'new' or 'mild', cannot be justified.

Current guidelines persist with the concept of a stepwise process to achieve glycaemic control: initial lifestyle intervention, followed by oral agents as monotherapy and then in combination, and finally insulin or glucagon-like peptide-1 receptor agonist therapy [4]. This paradigm is responsive to poor metabolic control *after* it has developed and mitigates against proactive intensification early in the disease trajectory. The National Institute for Clinical and Health Excellence (NICE) advocates continuation of pharmacological treatment until HbA_{1c} levels are \geq 59 mmol/mol (7.5%) [4], which has been dubbed a 'treatment to failure' approach [5].

The increasing recognition of the heterogeneity of polygenic Type 2 diabetes, with up to five phenotypes [6], means sub-classification is more challenging than ever. Other, less common aetiologies such as (monogenic) maturity-onset diabetes of the young (MODY) [7], slow-onset Type 1 diabetes and latent autoimmune diabetes of adults (LADA) may masquerade as Type 2 diabetes and require a high index of suspicion around the time of diagnosis. These examples highlight the importance of accurately defining the cause of diabetes at the outset and defining appropriate and tailored therapeutic strategies. It also supports the case for initial expert review by multidisciplinary diabetes teams.

The early phase after the diagnosis of Type 2 diabetes offers a chance to shape the individual's future outcome. The beneficial effects of dietary restriction with a very-low-calorie diet on Type 2 diabetes have gained prominence with the potential for 'remission' of Type 2 diabetes, particularly evident in those with diabetes of <4 years' duration [8]. Insulin therapy, as currently used, is often restricted to late in the course of Type 2 diabetes; however, shortterm intensive insulin therapy for 2-3 weeks with either continuous subcutaneous insulin infusion or multiple daily insulin injections in newly diagnosed Type 2 diabetes can normalize hyperglycaemia and induce long-term glycaemic control [9]. Predictors of remission, for both these strategies, include individuals with shorter duration of diabetes and fewer chronic Type 2 diabetes complications, which may reflect a greater reversible component of β -cell dysfunction [8,9]. The key determinant of the likelihood of inducing sustained remission is early intervention.

Early in the course of Type 2 diabetes there may be sufficient reversibility in the disease process to stabilize progressive β -cell deterioration, with the potential to induce sustained drug-free remission in carefully chosen individuals. We believe that a multidisciplinary team composed of individuals with specialist skills (such as general practitioners with a special interest, diabetologists, pharmacists and diabetes specialist nurses) should be involved at the outset of care with a remit to sub-classify the disease process and determine the intensity and type of therapy at the outset. This would be a short, intensive partnership with primary care to produce a 'legacy effect', not a proposal to divert management away from primary care.

This approach would not be easy. The numbers of people diagnosed with Type 2 diabetes creates a major strain on resources and there are logistical issues which are potential barriers to adopting the new treatment paradigm. Education and resources are scarce; however, this must be offset against the resources required to deal with the vascular complications of untreated diabetes.

Perhaps, in the future, we will come to see the diagnosis of Type 2 diabetes as the time for multidisciplinary team input?

Funding sources

None.

Competing interests

None declared.

M. B. Whyte D and N. Munro Faculty of Health and Medical Sciences, University of Surrey, Guildford, Surrey, UK

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

References

- 1 Stolar MW. Defining and achieving treatment success in patients with type 2 diabetes mellitus. *Mayo Clin Proc* 2010; 85(Suppl.): S50–S59.
- 2 Tabak AG, Jokela M, Akbaraly TN, Brunner EJ, Kivimaki M, Witte DR. Trajectories of glycaemia, insulin sensitivity, and insulin secretion before diagnosis of type 2 diabetes: an analysis from the Whitehall II study. *Lancet* 2009; **373**: 2215–2221.
- 3 Vas PRJ, Alberti KG, Edmonds ME. Prediabetes: moving away from a glucocentric definition. *Lancet Diabetes Endocrinol* 2017; 5: 848–849.
- 4 National Institute Health and Care Excellence (NG28). *Type 2 diabetes in adults: management*. London: NICE, 2015.

- 5 Owens DR, Monnier L, Barnett AH. Future challenges and therapeutic opportunities in type 2 diabetes: Changing the paradigm of current therapy. *Diabetes Obes Metab* 2017; **19**: 1339–1352.
- 6 Ahlqvist E, Storm P, Karajamaki A, Martinell M, Dorkhan M, Carlsson A *et al*. Novel subgroups of adult-onset diabetes and their association with outcomes: a data-driven cluster analysis of six variables. *Lancet Diabetes Endocrinol* 2018; 6: 361–369.
- 7 Shields BM, Hicks S, Shepherd MH, Colclough K, Hattersley AT, Ellard S. Maturity-onset diabetes of the young (MODY): how many cases are we missing? *Diabetologia* 2010; **53**: 2504–2508.
- 8 Steven S, Taylor R. Restoring normoglycaemia by use of a very low calorie diet in long- and short-duration Type 2 diabetes. *Diabet Med* 2015; **32**: 1149–1155.
- 9 Kramer CK, Zinman B, Retnakaran R. Short-term intensive insulin therapy in type 2 diabetes mellitus: a systematic review and metaanalysis. *Lancet Diabetes Endocrinol* 2013; 1: 28–34.