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Treatment and outcomes of HNF1A-MODY patients from a specialist monogenic diabetes clinic

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Background and aims: Monogenic diabetes is frequently misdiagnosed in general diabetes clinics, leading to missed opportunities for optimising treatment with sulphonylureas (SU) and monitoring outcomes of rare forms of diabetes. We reviewed treatment and outcomes in HNF1A-MODY patients currently or previously attending our monogenic diabetes clinic, in comparison to patients with Type 2 diabetes.

Methods: Clinical notes and electronic records of 49 HNF1A-MODY patients were reviewed, and compared with 79 patients with Type 2 diabetes matched for age and diabetes duration.

Results: Median age and diabetes duration were 48 and 17.1 years respectively for HNF1A-MODY vs 50.9 and 14.5 years in Type 2 diabetes ($p = 0.2$ and 0.26 respectively). Thirty (61.3%) MODY patients were currently taking SUs and 6 were previously treated. Twenty of the Type 2 diabetes group (25%) were treated with SU but with added insulin, GLP-1RA or oral agents.

Current median HbA1c in HNF1A-MODY was lower than in Type 2 diabetes: 7.4% (7.1% in current SU treated) vs 8.2% (7.6% on SU), $p = 0.001$. Reported IHD was 6.3% in HNF1A-MODY vs 21.1% in Type 2 diabetes ($p = 0.04$), PVD 2.1% vs 8.8% ($p = 0.19$), peripheral neuropathy 20.8% vs 51.4% ($p = 0.003$), background retinopathy 32.6% vs 54.1%, pre- and proliferative retinopathy 17.4% vs 27% ($p = 0.002$) and micro- or macroalbuminuria 22.5% vs 42.3% ($p = 0.03$).

Conclusion: Despite similar age and duration of diabetes, patients with HNF1A-MODY have a lower rate of vascular complications than Type 2 diabetes. Good long-term control with SU in HNF1A-MODY may explain these findings. As SU become a less popular choice of OHA in Type 2 diabetes, this emphasises the importance of accurate diagnosis of aetiology.

Clinical care and other categories posters: monitoring

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Disparities in the monitoring and complication screening of people with Type 2 diabetes

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Aims: People with lower socioeconomic status (SES) and ethnic minority groups have worse glycaemic control and higher incidence of diabetes related complications. We compared glycaemic control (HbA1c), renal function using estimated glomerular filtration rate (eGFR), and blood pressure (BP) across SES and ethnic groups, and identified any disparities contributing to these incongruent outcomes.

Methods: A cohort of people with Type 2 diabetes ($N = 60,327$) was identified from the University of Surrey-Lilly Real World Evidence database, using routinely collected primary care data. The number of people screened during a 12 month period (2015) was analysed. The impact of SES and ethnicity on propensity to screen was investigated using logistic regression adjusting for potential confounders (age, gender, body mass index, HbA1c, duration of diabetes, number of previous therapies, and eGFR).

Results: The majority of people had HbA1c monitoring (52,278; 86.7%), an eGFR result (52,999; 87.9%), and BP measurement (55,212; 91.5%). Ethnic group was identifiable in the majority (51,747; 85.8%) of people (White: 42,284; Asian: 5,706; Black: 2,648; Mixed: 552; Other: 557), and SES was identifiable in almost the entire cohort (59,830; 99.2%). After adjusting for confounders there were no differences by SES or ethnicity for HbA1c, eGFR, and BP monitoring; other than Asian people were more likely to have HbA1c monitoring (OR 1.20 95% CI 1.08-1.33; $p < 0.001$).

Conclusions: No substantial disparities were observed in HbA1c, eGFR or BP monitoring/screening across people of different SES or ethnicity. This reassuring finding demonstrates that disparities in monitoring and management of diabetes are avoidable.

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Real world evidence shows that investing in accuracy of blood glucose monitoring (BGM) strips improves HbA1c control in patients with Type 1 diabetes and patients with Type 2 diabetes

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Objectives: BGM strips cost NHS England £157 million/year. We investigated how accuracy, quantity, and unit costs of strips can be related to % of patients with Type 2 diabetes achieving HbA1c control in GP practices.

Methods: The National Diabetes Audit (NDA) 2013-14/14-15 was used for the number of patients with Type 1 and Type 2 diabetes and %patients achieving Target Glycaemic Control (TGC) with HbA1c < 58 mmol/mol in GP practices.

From published data we calculated +/-% deviation covering 95% results for each BGM strip and from number of each strip prescribed we determined “overall average strip accuracy” (OASA) for every practice and related to TGC achieved for both types.

Results: NDA covers 3,700(50%) of suitable GP practices and 1.4million patients using 550million BGM strips, for 83% of which we could calculate accuracy.

The highest accuracy decile of GP practices with OASA $\pm 11\%$ gave 31.5% of patients with Type 1 diabetes and 67.6% of patients with Type 2 diabetes reaching TGC. The lowest decile OASA $\pm 17\%$ gave 29% of patients with Type 1 and 66.2% of Type 2 diabetes achieving TGC. As only 20% patients with Type 2 diabetes actually use BGM strips, using the most accurate strips for patients with Type 2 diabetes increased the proportion of patients achieving target glycaemia by 7%.