

INTRODUCTION

Type 2 diabetes (T2D) comprises a spectrum from thinner patients who may be more insulin deficient to those who are overweight/obese and insulin resistant.

METHODS

To compare management between these phenotypes, we reviewed 1007 T2D patients attending annual review.

Patients were divided into quartiles by body mass index (BMI) and those in the lowest and highest quartiles were compared. Phenotypic and biochemical data were compared using t tests while chi-square-test was used to compare proportions on different treatments.

RESULTS

Table 1 details the comparison between these groups:

- Highest BMI quartile had significantly higher mean HbA1c, and were slightly younger
- Greater proportion of patients in the highest BMI quartile were on insulin, sulphonylurea, biguanide and GLP-1 analogues ($p < 0.05$ respectively)
- However, DPPIV inhibitor usage was similar ($p = 0.271$)

Systolic blood pressure, total and LDL cholesterol and eGFR, were not different between the groups.

CONCLUSION

In summary, thinner patients were slightly older and had slightly better glycaemic control, despite less aggressive glycaemia management. We believe that this reflects a different underlying pathophysiology of diabetes between these phenotypes and highlights the need for a personalised management approach.

	Lowest BMI quartile	Highest BMI quartile	Comment and p-values
N	252	252	
BMI*	25.1±2.1	40.2±4.9	
Age* (year)	63.3±12.8	59.6±11.9	t-test, p=0.001 Mean difference 3.74
Gender:			
Female	39% (99/252)	34% (86/252)	$\chi^2 = 1.443$ (1, n=504), p=0.230
Male	61% (153/252)	66% (86/252)	
HbA1c*(mmol/mol)	54.0±14.8	59.0±18.6	t-test, p=0.001 Mean difference 5.02
Number of antidiabetics*	1.34±0.8	1.67±0.9	t-test, p=0.000 Mean difference 0.336
Proportion of patients on:			
Insulin	14% (13/249)	25% (62/249)	$\chi^2 = 9.333$ (1, n=498), p=0.002
Sulphonylurea	28% (71/252)	37% (92/252)	
Biguanide	72% (182/252)	81% (205/252)	
DPPIV inhibitor	13% (34/252)	10% (26/252)	
GLP-1 analogue	2% (6/252)	13% (34/252)	

Table 1: Comparison between lowest and highest BMI quartiles of diabetic patients (N=1007)

*data presented as mean±SD

Fig 1. Diabetic medication breakdown between lowest and highest BMI quartile

