



Patients with giant cell arteritis have a lower HbA1c compared to controls

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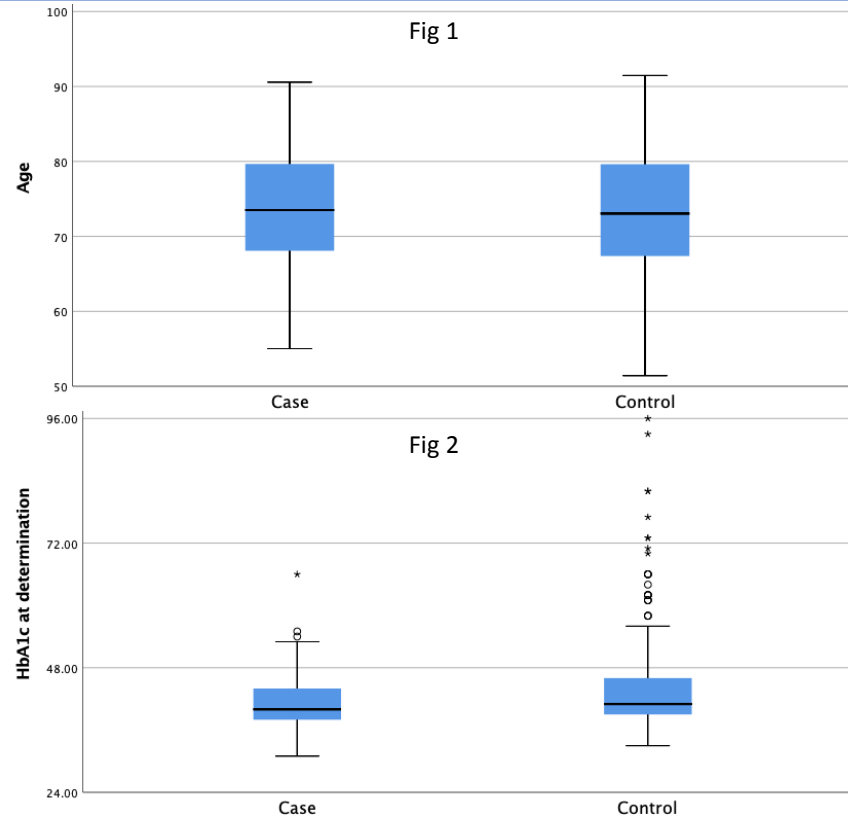


Background: GCA is a condition that relies on normal vasa vasora for pathogenesis. Type II diabetes is associated with microangiopathy. We hypothesise that patients with diabetes may be protected against GCA.

Methods: Patients referred to the one stop GCA clinic were included in the study. Each patient with GCA had 2 age (by decade) and gender matched controls. The last HbA1c measured as part of routine monitoring was analysed. We compared the HbA1c of cases and controls using the Mann-Whitney U Test. The distribution of HbA1c by cases and controls and HbA1c (Normal range, pre-diabetes and diabetes) was analysed by the chi-square statistic. For the patients in the diabetes range HbA1c, we looked for presence of retinopathy as a marker of microangiopathy.

Results:

- 448 patients were referred for consideration of GCA. We had age and gender matched HbA1c recorded for 81 cases and 162 controls (Fig1)
- Median (IQR) HbA1c for cases was 40 (6) mmol/mol and 41 (6.75) mmol/mol for controls. Mann-Whitney U test gave a U value of 5647.5 (1 tailed p = 0.0384) (Fig 2)



Results: (contd)

- Table 1 demonstrates observed values and percentage variation from expected values. There is a striking reduction in numbers of patients with GCA who also have diabetes range HbA1c. The chi-squared statistic is 11.2 with 2 degrees of freedom (p=0.0037).
- Of the 8 patients with GCA who had HbA1c in the diabetes range - 1/6 (16.7%) had diabetes eye disease (data not available for 2). Of the 37 controls with diabetes range HbA1c - 18/34 (52.9%) had diabetes eye disease. The numbers are too small to analyse.

Conclusion:

Patients with GCA have a lower than expected HbA1c. This may be an additional factor to consider when deciding probability of GCA. Type 2 DM may have a protective effect against GCA. We will perform a larger study to prove this hypothesis.

HbA1c	Cases	Controls	Totals
<43	48 (-2.7%)	100 (+1.4%)	148
43-47	25 (+50%)	25 (-25%)	50
>47	8 (-46.7%)	37 (+23.3%)	45
	81	162	243

Observed HbA1c frequency by cases and controls. Figures in brackets denote percentage variation from expected.