1. INTRODUCTION

The presence of excessive proteins in urine is considered not only an indicator of kidney damage, but also a predictor of cardiovascular disease; it also represents an overall micro-vascular damage.

2. AIMS

- This study aimed to investigate the relationship between microalbuminuria and TIA as part of an ongoing research project to correlate the impairment of cerebral auto-regulation with microalbuminuria in first-time TIA patients, and to assess the prognostic outcomes of such impairment (Figure 3).

3. METHODS

- This is a cohort study, involving 56 first-time TIA patients (mean age 55.5 years); 35M: 21F, attending a Stroke/TIA Clinic in Qatar. Microalbuminuria was first measured by calculating the Albumin/Creatinine Ratio (ACR). Urine samples (with and without microalbuminuria) were then examined using SDS-PAGE electrophoresis. Protein bands were identified by their rate of migration in comparison with standard molecular weight (MW) markers.

- 15 urine samples with microalbuminuria (30-300mg/24hr) and 12 samples with normal albumin (<30mg/24hr) were examined (using SDS-PAGE electrophoresis).

- Protein bands were identified by their rate of migration in comparison with standard molecular weight markers.

4. RESULTS

- 19 (34%) TIA patients showed evidence of microalbuminuria (30-300mg/24hr) and 38 (64%) showed normal albuminuria (<30mg/24hr). SDS-PAGE electrophoresis revealed the presence of 3 protein bands.

5. CONCLUSIONS

This study has just started; its outcome will enable us to answer the following questions:

- Whether there is any correlation between auto-regulation and microalbuminuria in first-time TIA patients?

- Do TIA patients with impaired cerebral auto-regulation and microalbuminuria have more vascular events than TIA patients with normal cerebral auto-regulation without microalbuminuria?

- Is there any statistically significant difference in the short-term and long-term prognosis (between the two groups)?

- Whether changes in cerebral auto-regulation can be predicted by such a simple urine test?

- Whether testing for cerebral auto-regulation (CA) in Stroke/TIA clinics will help in identifying a subgroup of TIA patients who are at grave risk of developing microvascular and macrovascular diseases, including stroke?

- Whether post TIA stroke is independently affected by impaired CA (after taking into account other confounding factors).

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