

# Socio-demographic and risk factor differences between TIA and TIA mimics

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## INTRODUCTION

- Diagnosis of Transient Ischaemic Attack (TIA) remains a clinical challenge, with a strong reliance on clinical history and clinician experience and expertise. This is because there is no single diagnostic test to determine whether someone has had a TIA
- Brain imaging [CT or MRI] may show ischaemia or an alternative cause, while diffusion-weighted MRI only shows infarction in 30 to 50% of patients with a clinical diagnosis of TIA by stroke specialists<sup>1,2</sup>
- Diagnoses that are not a TIA or stroke are classified as TIA mimics. The proportion of patients diagnosed as TIA mimics vary from 50-70%<sup>3,4</sup> There are very few previous studies that have described TIA mimics, and examples of mimics include migraines, seizures, syncope, and functional neurological disorder<sup>5</sup>
- Previous studies did not evaluate sociodemographic and risk factor differences between TIA and TIA 'mimics'.

## AIMS

The aims of this retrospective survey were to evaluate sociodemographic and risk factor differences between TIA and TIA 'mimics' in patients presenting to an multi-ethnic inner-city neurovascular clinic.

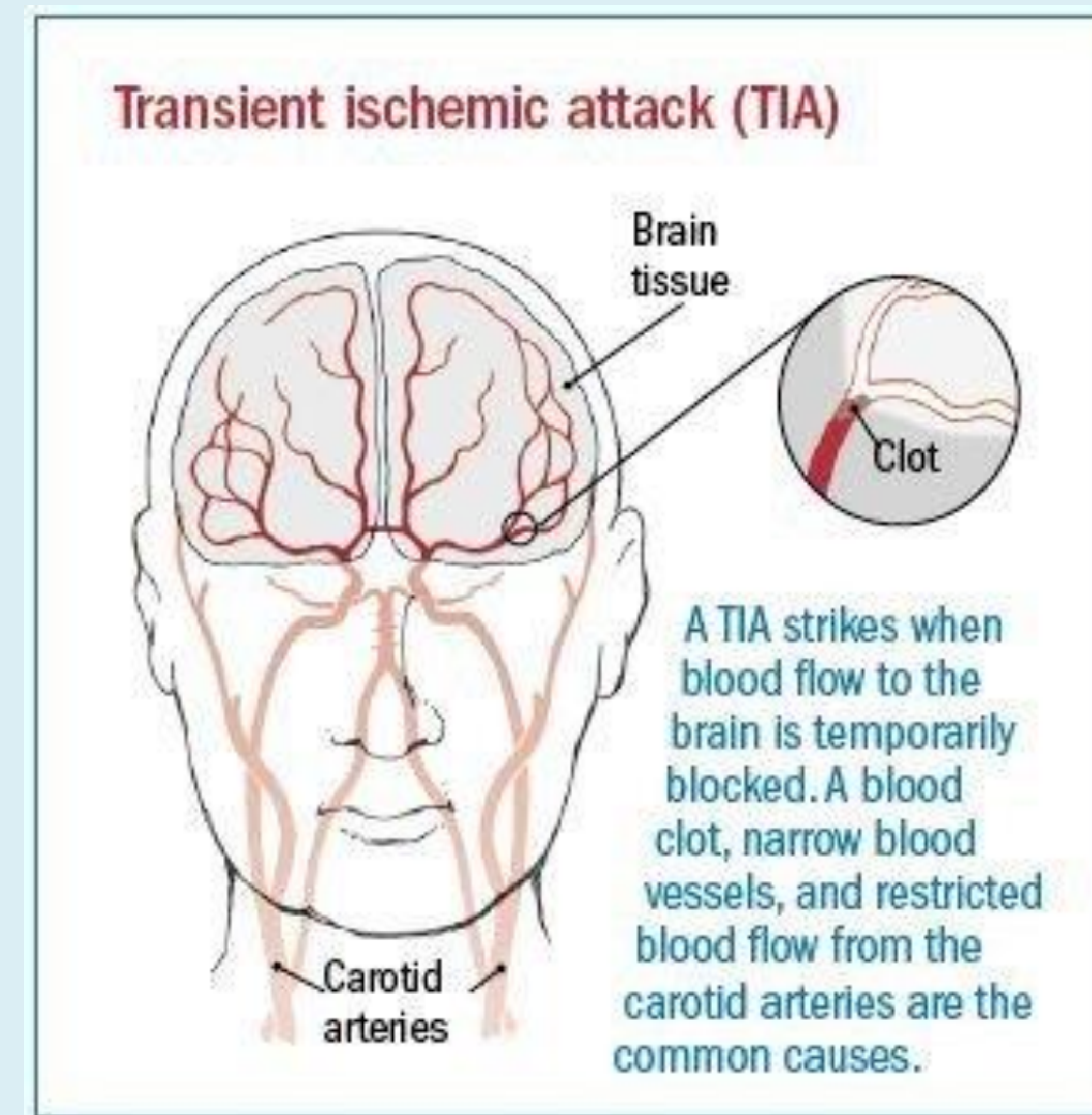
## METHODS

- Data was obtained over a 2-year period [2019-2020] for all new patients assessed in a consultant-provided daily week-day neurovascular service that serves a million multi-ethnic, inner-city population
- Patients in this one-stop clinic are assessed face to face by a stroke specialist and a clinical diagnosis is made after careful evaluation of history and examination findings, combined with a battery of investigations including blood tests, electrocardiogram (ECG), Carotid Dopplers and Brain imaging [MRI brain scan or CT if appropriate or MRI is contraindicated]. A virtual clinic is subsequently undertaken to ensure a definitive final diagnosis following receipt of all tests.
- Further non-urgent tests undertaken, if clinically relevant, include Transthoracic Echocardiography, 24-72 hr Ambulatory tape and Bubble-contrast Echocardiography +/- Transoesophageal Echocardiography
- Data collected for this survey included socio-demographic details, clinical risk factors, source of referral and final clinical diagnoses.

## RESULTS

### Socio- Demographic differences between TIA & TIA mimics

	All Subjects	TIA / Stroke diagnosis	Alternative diagnoses	P value
Number of subjects	1764	694 (39.3%)	1070 (60.7%)	
Gender				P<0.001
Male	779 (44%)	358 (52%)	421 (39%)	
Female	985 (56%)	336 (48%)	649 (61%)	
Age, years, mean (sd)	63.4 (15.9)	69.3 (13.8)	59.7 (16.1)	P<0.001
Ethnicity				P=0.034
White	1154 (65.4%)	485 (69.9%)	669 (62.5%)	
Black Caribbean	280 (15.9%)	94 (13.5%)	186 (17.4%)	
Black African	138 (7.8%)	50 (7.2%)	88 (8.2%)	
South Asian	167 (9.5%)	57 (8.2%)	110 (10.3%)	
East Asian	25 (1.4%)	8 (1.2%)	17 (1.6%)	
BAME*	610 (34.6%)	209 (30.1%)	401 (37.5%)	
Referral Source				
Emergency Medicine	680 (38.6%)	275 (39.6%)	405 (37.9%)	
General Practice	850 (48.2%)	282 (40.6%)	568 (53.1%)	
Eye clinics	79 (4.5%)	47 (6.8%)	32 (3.0%)	
Medical Wards	136 (7.7%)	80 (11.5%)	56 (5.2%)	
Neurology clinic	19 (1.1%)	10 (1.44%)	9 (0.8%)	
Hypertension	815 (46.2%)	388 (55.9%)	427 (39.9%)	P<0.001
Diabetes	304 (17.2%)	151 (21.8%)	153 (14.3%)	P<0.001
Atrial Fibrillation	111 (6.3%)	68 (9.8%)	43 (4.0%)	P<0.001
Chronic Heart Disease	221 (12.5%)	128 (18.4%)	93 (8.7%)	P<0.001
Carotid stenosis>30%	39 (2.2%)	35 (5.0%)	4 (0.4%)	P<0.001
Patent Foramen Ovale	10 (0.6%)	10 (1.4%)	0 (0.0%)	P<0.001
Cardiolipin antibodies	29 (1.6%)	22 (3.2%)	7 (0.7%)	P<0.001
Thrombophilia abnormality	23 (1.3%)	16 (2.3%)	7 (0.7%)	P<0.001
No risk factors	134 (7.6%)	96 (13.8%)	38 (3.6%)	P<0.001



## DISCUSSION

- Of 1764 patients, 39%[694] were diagnosed as TIA; 61%[1070] were TIA mimics with 40 distinct differential diagnoses.
- Compared to TIA mimics, TIA patients were older [p<0.001]; higher prevalence of TIA mimics in females vs males [66%vs54%; p<0.001]. There were proportionately more patients with TIA mimics from Black and minority ethnic groups (66%) compared whites (58%)[p=0.034].
- Compared to TIA mimics, TIA patients had significantly higher prevalence of Hypertension, Diabetes, Atrial Fibrillation, Chronic Heart Disease and carotid stenosis. 14% of TIA patients had no identifiable risk factors.
- This large survey has described socio-demographic differences and prevalence of risk factors between TIA patients and TIA mimics. These differences may be useful in terms accurate diagnosis of TIA by experienced clinicians. This study provides valuable information for clinicians and researchers of stroke services in future

## REFERENCES

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