

RISK FACTORS THAT PREDICT TRANSIENT VS. PERMANENT VISUAL LOSS IN RETINAL ISCHAEMIA PATIENTS



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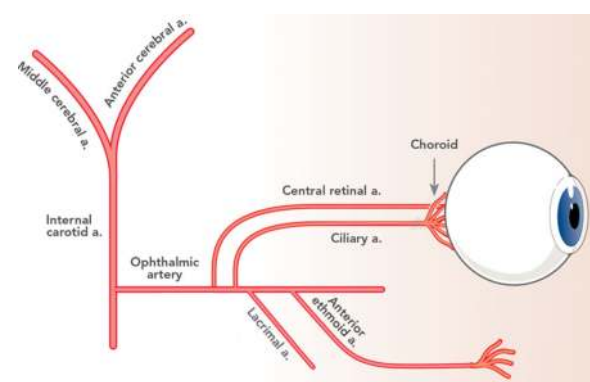
Introduction

Retinal ischaemic events are a type of stroke affecting the arterial supply to the eye. The central retinal artery is a branch of the ophthalmic artery which originates from the internal carotid artery. Interruptions to blood flow can result in permanent or transient damage to the retina which manifests as visual loss. Carotid stenosis >50% is found in 20% of patients with permanent visual loss and 10% with transient symptoms and recurrent episodes are more common¹. Atrial fibrillation has also recently been described as being under diagnosed and under treated². Other aetiologies include small vessel disease and non-arteritic anterior ischaemic optic neuropathy. These events are frequently misdiagnosed on first presentation which can lead to a delay in referral to stroke services, thereby excluding patients from thrombolytic therapy such as alteplase.

Aims

We aim to determine:

- Rate of transient visual loss (TVL) vs permanent visual loss (PVL) in patients with retinal ischaemic events
- Prevalence of risk factors in patients with retinal ischaemic events including mean number of risk factors
- Independent risk factors predisposing to PVL vs TVL



Blood supply to retina via ophthalmic artery and central retinal artery³

Methods

Setting:

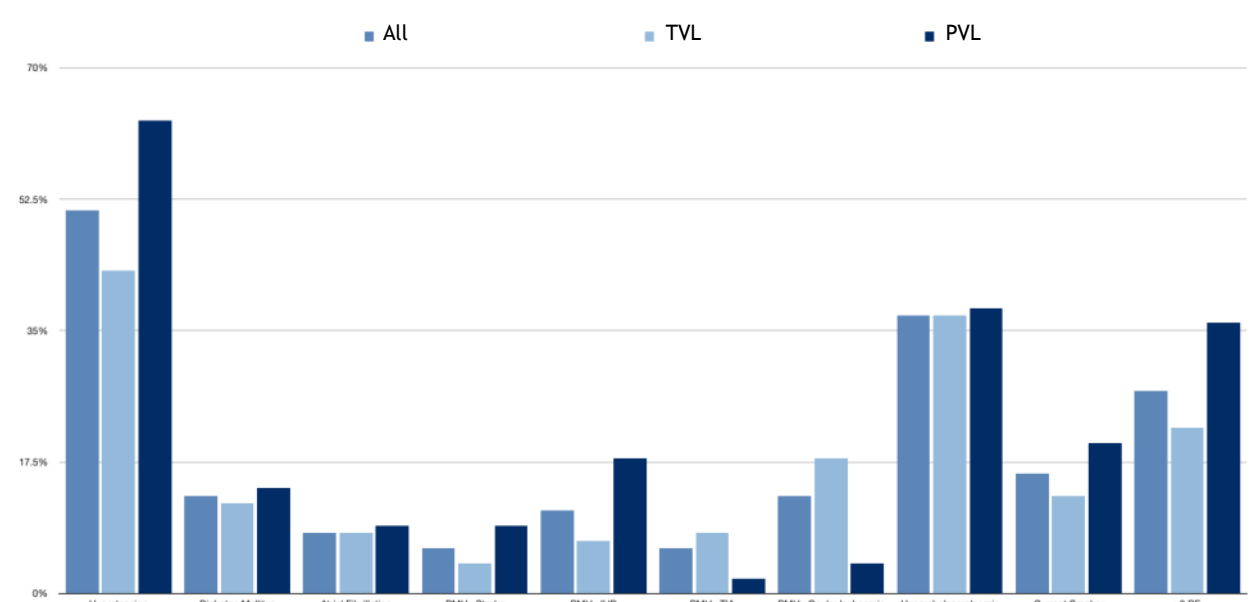
TIA clinic in University College Hospital, a tertiary centre receiving referrals from North Central London and Moorfields Eye Hospital.

Data collection:

Retrospective review of 485 consecutive patients presenting with TVL and PVL from June 2013-September 2018.

Results

	All	TVL	PVL	p value	
N (%)	367 (100%)	228 (62%)	139 (38%)		
Female (%)	149 (41%)	106 (47%)	43 (31%)	0.003	
Age (SD)	66.1 (14)	65.5 (13)	67.1 (15)	0.278	
Hypertension, n (%)	185 (51%)	98 (43%)	87 (63%)	0.000	
Diabetes mellitus, n (%)	47 (13%)	27 (12%)	20 (14%)	0.463	
AF, n (%)	30 (8%)	18 (8%)	12 (9%)	0.787	
PMH stroke, n (%)	23 (6%)	10 (4%)	13 (9%)	0.054	
PMH IHD, n (%)	41 (11%)	16 (7%)	25 (18%)	0.001	
PMH TIA, n (%)	22 (6%)	19 (8%)	3 (2%)	0.016	
PMH ocular ischaemia, n (%)	46 (13%)	40 (18%)	6 (4%)	0.000	
Hypercholesterolaemia, n (%)	137 (37%)	85 (37%)	52 (38%)	0.939	
Smoking	Never	232 (64%)	149 (66%)	83 (60%)	
	Ex	76 (21%)	49 (22%)	27 (20%)	
	Current	57 (16%)	29 (13%)	28 (20%)	0.159
Total number risk factors, mean (SD)	1.7 (1.4)	1.5 (1.4)	1.9 (1.4)	0.008	
>3 vascular risk factors, n (%)	100 (27%)	50 (22%)	50 (36%)	0.003	



Bar chart showing prevalence of individual risk factors in patients with TVL vs PVL

Discussion

- Mean number of risk factors was 1.5 for TVL and 1.9 for PVL (p=0.02)
- Independent risk factors predisposing to PVL vs TVL included:
 - Hypertension (OR 1.8, 95%CI 1.2-2.7, p=0.000)
 - Ischaemic Heart Disease (OR 2.6, 95%CI 1.3-5.0, p=0.001).
 - >3 risk factors (53% of PVL vs 47% of TVL (p=0.026))

Conclusions

Retinal ischaemic events represent an excellent opportunity for aggressive secondary prevention. About half of patients had >3 vascular risk factors, with hypertension, IHD and CS >50% more likely to be associated with PVL.

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References

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