

Complex Cases 2017

Bulletin #2 Stroke risk following TIA

Case: 54 year old male

Presenting complaint: Presents 2 days after an episode of transient vision loss in the left eye, lasting approximately 15 minutes. Vision blacked out and was followed by a slow recovery, from centre to periphery. Patient reported feeling washed out afterwards. No headaches, and no other neurological signs and symptoms.

General health: Good. Not diabetic. Nil medications. No history of migraine.

Past ocular history: Unremarkable

Family ocular history: Unremarkable

Examination finding

	Right	Left
Cover Test	No movement	No movement
Motility	Full	Full
Visual acuity	6/6	6/6
Refraction	+0.50/-0.75x10	-0.25/-0.75x120
IOP (Perkins)	18mmHg	16mmHg
Slit-lamp examination		
Lens	Clear	Clear
Fundus examination		
Optic discs (C/D ratio)	Flat and distinct (0.6)	Flat and distinct (0.6)
Vessels	No emboli No haemorrhages	No emboli No haemorrhages
A/V crossings	Normal	Normal
Maculae	Normal	Normal
Additional medical information		
Pulse rate	72 beats/minute	
Blood pressure	150/95	

Table 1 Clinical examination

Key features of this case:

- ✓ Monocular transient visual loss, with full recovery i.e. TIA
- ✓ Normal vision and intraocular pressures
- ✓ Normal fundii examination
- ✓ Elevated blood pressure

Transient ischaemic attacks (TIA), or ‘mini strokes’ are defined as episodes when there is a temporary and brief interruption to the blood supply to the brain. They can be considered as a ‘mini stroke’ because they present in a very similar fashion to a stroke, however are shorter lasting.

TIA should be regarded by practitioners as a frequent warning sign of an impending stroke. It is a key role of optometrists to consider TIA or stroke in our patients and refer appropriately in a suitable time frame, to decrease patient morbidity and mortality.

Stroke is defined as a neurological deficit attributed to an acute focal injury of the central nervous system (CNS), by a vascular cause, including cerebral infarction, intracerebral haemorrhage (ICH), and subarachnoid haemorrhage (SAH).

Possible signs and symptoms of a TIA or stroke include:

- ✓ Dizziness, loss of balance or an unexplained fall
- ✓ Loss of vision, sudden blurred or decreased vision in 1 or both eyes
- ✓ Headaches
- ✓ Difficulty swallowing
- ✓ Weakness, numbness or paralysis of the face, arm or leg on either or both sides of the body
- ✓ Speech difficulties and comprehension difficulties

Optometrists are well placed to look for signs and symptoms of a stroke or TIA for patients in their clinics. If you suspect your patient is having a possible stroke or TIA, remembering this simple acronym from the Stroke Foundation Australia can give you the necessary information to determine if they need immediate medical attention. Accurately and efficiently determining this can be the difference between preventing permanent damage and even saving your patient's life.

Face – has their mouth drooped?
Arms – can they raise both of their arms above their head?
Speech – is their speech slurred? Can they understand what you're saying?
Time – Send them to an Emergency Dept. Do not delay.

Figure 1 (Stroke Foundation- Australia, 2017). FAST acronym

One year STROKE risk after TIA

- Most TIA's resolve within 60 minutes
- Less than 15% chance of complete resolution if the TIA last longer than 60 minutes
- About 2% of patients will experience a full stroke within 48hrs; up to 10% of patients within 90 days; up to 22% within ONE year.

The ABCD² score of a TIA

An acronym used in clinical practice to predict those TIA patients at the highest risk of having a stroke is ABCD²: **A**ge, **B**lood pressure, **C**linical features, **D**uration of symptoms and **D**iabetes. A points system is used for each of these risk factors, as per the below.

ABCD² Score

Age: ≥60yrs (1pt)
 Blood pressure: Systolic BP ≥140 or Diastolic BP≥90 (1pt)
 Clinical features: Focal weakness (2pts) or

speech impairment without focal weakness (1pt)
 Duration of symptoms: ≥60min (2pts) or ≤59min (1pt)
 Diabetes: (1pt)

Advancing age, male gender, hypertension and diabetes = high risk! Higher ABCD² scores are correlated with higher risks of impending strokes.

Risk of stroke at 2 days
 0-3pts = 1% risk
 4-5pts = 4.1% risk **≥4pts admit to hospital**
 6-7pts = 8.1% risk

Studies have shown that TIA patients with an ABCD² score of 4 or more had a significantly heightened risk of stroke in the near future. Those with scores of less than 4 were at relatively lower risk. Best practice guidelines recommend that patients with an ABCD² score of 4 or more are admitted to hospital immediately for diagnostic evaluation and commencement of treatment. The risk of impending strokes with low ABCD² scores is still very real, so these patients need referral to their general practitioners for full diagnostic evaluation within 2 days after a TIA.

Summary of this case:

ABCD ² Score for this patient	
A	0 points
B	1 point
C	0 points
D	1 point
D	0 points
Score	2
Risk of stroke at 2 days	1 % risk

- Advice and management given to this patient:
- ✓ Referred to general practitioner within 2 days for full work up of cardio vascular risk factors and blood pressure management
 - ✓ Educated about stroke risk, signs and symptoms, and urgent medical attention required

References

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