

RECOGNITION AND MANAGEMENT OF TRANSIENT ISCHAEMIC ATTACK



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Summary



- **Definitions**
- **Clinical Presentation**
- **TIA Mimics**
- **Risk Stratification and Importance**
- **Standards for Neurovascular Service**
- **Treatment**
- **Current and Proposed SLHT Model of Care**

Definitions



- **Transient Ischaemic Attack**

- A focal (at times global) deficit in cerebral function, due to either cerebral ischaemia or intracerebral haemorrhage, and the symptoms of which resolve completely within 24 hours

OR

- A brief episode of neurologic dysfunction resulting from focal temporary cerebral ischaemia not associated with cerebral infarction
- In practice most TIAs last far less than 24 hours (and the majority less than an hour)
- TIA is primarily a clinical diagnosis
- Diagnostic difficulty: Diagnostic positivity

Some Key Pointers



- Focal neurological deficit
- Complete resolution of symptoms
 - Non disabling stroke
- Negative symptoms
- Rapidity of onset
- Other symptoms
- Vascular risk
- Stereotypical attacks
- ‘The Stroke Test’

ROSIER



- **Recognition of Stroke in the Emergency Room**
- **Score one point for each of:**
 - Face weakness
 - Arm weakness
 - Leg weakness
 - Dysphasia
 - Visual field defect
- **Score minus one point for each of:**
 - Loss of consciousness
 - Seizure
- **Diagnosis likely to be cerebrovascular if score > 0**

TIA Mimics



- **Symptoms which spread from site to site or from modality to modality**
 - Epilepsy
 - Migraine

 - Hypoglycaemia
 - Stress related / functional symptoms
 - Space occupying lesions
 - Syncope
 - Specific disorders (BPPV, TGA)
 - Undetermined

Example Scenarios



- A 69 year old man with hypertension and diabetes presents with an episode of abrupt onset of difficulty speaking and right arm weakness lasting 10 minutes. He has no associated symptoms and feels well on recovery.
- A 45 year old woman with no significant PH presents with paraesthesia which starts in the left hand, then spreads over a period of 10 minutes to involve the whole of the left arm and left side of her face before resolving. She has a minor headache after the resolution of her paraesthesia. Her mother has a long term history of migraine
- A 35 year old man presents with recurrent stereotypical episodes of right sided facial numbness, paraesthesia and 'jerking' of his jaw. The episodes have become steadily more frequent over a period of 6 months.

Importance and Risk Stratification



- **Risk of stroke after TIA**
 - 10% in the first seven days
 - 20% in the first month
- **Also a significant predictor of other vascular endpoints (notably MI)**
- **All patients with suspected TIA require assessment , investigation and management to address these risks**

ABCD² score



A	Age	≥60 years	1 point
B	Blood Pressure	≥140 systolic or 90 diastolic	1 point
C	Clinical Features	Hemiplegia	2 points
		Dysphasia	1 point
D	Duration	≥ 60 mins	2 points
		10-59 mins	1 point
D	Diabetes Mellitus	Present	1 point

ABCD2 score in Risk Stratification

ABCD2	2 day risk	1 week risk
6-7	8.1%	12.0%
4-5	4.1%	5.9%
0-3	1.0%	1.2%

- High risk patients are regarded as those with an ABCD2 score of 4 or more
- Patients with multiple events (ie more than one in a week) should be regarded as being at high risk
- Risk of stroke after non disabling stroke approximates to the same risk as ABCD2 scores of 6-7.

Standards for TIA Management



- High risk patients should be seen and investigated within 24 hours
- Low risk patients should be seen and investigated within 7 days
- If neuroimaging is required, MRI with diffusion weighted imaging is the appropriate modality
- Patients with significant carotid stenosis should be referred to a vascular surgery service within 7 days
- These patients should have their surgery within 14 days
- Role of neuroimaging

Management of TIA



- **Long term prevention of stroke: generally use evidence from major stroke secondary prevention studies**
 - Antiplatelet agents (aspirin/dipyridamole OR clopidogrel alone)
 - Manage hypertension
 - Statins
 - Manage diabetes
 - Stop smoking
 - Anticoagulate for AF
 - Endarterectomy for carotid stenosis

Prevention of stroke in the first week



- **EXPRESS study**

Presuming no significant infarct (or bleed) on neuroimaging

- Aspirin and clopidogrel for high risk patients (conventional antiplatelets for low risk patients)
- Statins
- Immediate management of hypertension
- Immediate anticoagulation for patients in AF with potentially embolic events
- Assessment for carotid stenosis

- RISK OF STROKE (90 days): 10.3% → 2.1%

TIA Management Models



- Many units admit high risk patients and see lower risk patients in frequent neurovascular outpatient clinics
- **SLHT @ present**
 - Admit high risk patients
 - Low risk patients seen in DAU service (Dr Yu: Greenwich / Bexley) or in OPD (Drs Sulch / Rhodes: Bromley)
- **Future Plans**
 - Daily (incl weekends) open access clinics at PRUH (7 days) and QE (5 days) for all patients with same day imaging and management planning
- **Thrombolysis**

Pragmatic Primary Care approach



- Regard patients as having had a stroke if they still have symptoms when you see them
- Ongoing symptoms – refer to ED
 - Some of these patients will be discharged as their symptoms will resolve between you seeing them and ED seeing them
- High risk patients – refer to ED
- Low risk patients – refer to Dr Yu (Bexley) or Dr Rhodes (Bromley) via faxed letter
- Major communications campaign will occur prior to introduction of new model (probably in October 2010)

Lifestyle Advice



- **Driving**
- **Flying**
- **Other Activities**

Summary



- The diagnosis of TIA should be made positively
- It is a difficult diagnosis and mimics are common
- All patients need assessment: high risk patients need this done rapidly (within 24 hours)
- Aggressive initial management can significantly reduce the short term risk of stroke
- SLHT is developing a new model for managing such patients which will be launched in the autumn