TIA: What's the Rush?

Why see and investigate TIA patients quickly?

- Increased risk of stroke in first 24 hours after TIA reducing over time
- Urgent investigation
- Urgent management
- Alternative diagnoses

Mr WR

- 63 yr old Factory worker
- Felt unwell at work , colleagues noticed R sided weakness and couldn't understand him
- R arm/leg weakness and R facial weakness, dysarthria
- Gradually improved over next 24 hrs

Mr WR

- ABCD score : 6
- Smokes 15/day
- PMHx – Aortic Aneursym, Aorto- Bifemoral Graft, Left Femoral embolectomy, COPD
- DHx- salbutamol, beclomethasone

Mr WR

- Left lacunar infarct
- Started : Aspirin, Simvastatin
- ECHO : N LV size & function , EF 82%
- Carotids: R internal - >75%
- Referred for endarterectomy

Mrs NP

- Dysphasia – resolved
- Same symptoms next day - resolved
- Unsteady, nausea, unwell lasted one day - resolved
- GP aspirin
- Allergic reaction
- Clopidogrel

Mrs NP

- Referred
- Returned to GP for ECG, in AF
- Seen urgently
- CT on day – NORMAL
- Carotids on day - NORMAL
- Anti coagulated
- No further episodes

Mr PS

- Abrupt onset left facial weakness, dysarthria, dribbling
- Resolved over a few days
- No signs when seen
- Hypertension
- GP started aspirin and statin
- CT done > 1 month later

- Who should be seen urgently?
- Who can wait longer?

ABCD

- *Lancet 2005; 366*
- A Age >60
- B Blood pressure > 140/90
- C One sided weakness, speech disturb, neither
- D Duration, >60, 10-59, <10 mins

ABCD

- Predicts stroke within 7 days of TIA
- OXVASC and TIA clinic populations

ABCD

ABCD Score	%Risk Stroke 7 days
1	0
2	0
3	0
4	1.1
5	12.1
6	31.4

ABCD2

- *Lancet 2007; 369*
- ABCD plus diabetes (1 point)

ABCD 2

ABCD2 score	Stroke risk 2 days	Stroke risk 7 days	Stroke Risk 90 days
<4	1%	1.2%	3.1%
4-5	4.1%	5.9%	9.8%
>5	8.1%	11.7%	17.8%

EXPRESS Study

- Effect of urgent treatment of TIA on early recurrent stroke
- *Lancet 2007; 370*

EXPRESS Study

- 10% of strokes occur in the week after TIA
- Two phase comparison
- Clinic within one week, GP prescribes
- Daily clinic with prescription
  - Anti platelet
  - Simvastatin
  - ACE for BP

EXPRESS Study

- Risk of stroke at 90 days
  - 10% phase one
  - 2% phase two

TIA: What's the Rush?

Headlines in Stroke Secondary Prevention

Scottish Intercollegiate Guidelines Network

June 2007

Preventing Recurrent Stroke in Patients with Ischaemic Stroke

Antiplatelet Agents

- No evidence for Dypiridamole or Clopidogrel alone in preference to Aspirin
- Aspirin 75mg and Dipyridamole MR 200 mg BD best combination
- Aspirin alone if intolerant
- Clopidogrel or Dipyridamole alone if Aspirin allergy
- Cover GI effects with PPI
- Combination of Aspirin and Clopidogrel not recommended

Statins

- A statin should be prescribed irrespective of cholesterol level
- Proportional to reduction in LDL
- Reduces coronary and all cause mortality
- Atorva 80 or simva 40

Anticoagulants

- Not recommended for *non-cardioembolic* stroke
- Any small benefit offset by bleeding complications

Anticoagulants

- Ischaemic stroke or TIA in AF should be considered for anticoagulation
- 10% per annum in AF with previous when Px Aspirin cf 2.7% if no stroke
- Reduced to 4% and 1.5% with Warfarin
- 60 fewer recurrent strokes per year per 1000 patients treated

Anticoagulants

- 60 fewer recurrent strokes per year per 1000 patients treated
- Major extracranial bleeding more frequent
- No increase in intracranial bleeding
- More benefit if older
- Tight INR control, <3, reduces bleeding

Timing of Anticoagulants

- Guided by severity of patient's event
- More severe stroke anticoagulate later (>2weeks)
- TIA immediate
- *ALWAYS* obtain CT first

Antihypertensives

- Well established link between BP and stroke
- BHS <140/85
- Secondary prevention studies in stroke specifically showed heterogeneity for drug B Blocker not effective
- Evidence for ACE and Thiazides
- Guideline recommends considering ACE/Thiazide even if BP normal

Other

- Vitamins and minerals - no evidence (homocysteine)
- Atrial appendage occlusion – no evidence

PFO / Cryptogenic Stroke

- Aspirin Px if shunt seen
- Anticoagulation if ‘high risk’
- Closure cosidered if recurrence on optimum Px

Carotid Intervention

- Highly effective >75%
- Modestly effective >50%
- Greatest benefit in first two weeks after event

Carotid Intervention

- Within two weeks NNT=5
- 2-4 weeks NNT=10
- 4-12 weeks NNT=18
- >12 weeks=125

Confusingly this data is for all those with stenosis >50%

Carotid Intervention Risks

- 1.4-2.9% death
- 4.2-6.5% death and stroke combined
- Benefit is greater for older people

Carotid Intervention Recommended for

- Male, stenosis 50-99%
- Female, stenosis 70-99%
- No justification for witholding on age grounds alone
- Important to receive optimum medical Px as well

Asymptomatic Carotid Disease

- Younger men with bilateral disease
- Operators stroke or death rate should be low
- Not recommended if over 75 or female (more difficult surgery)

Carotid Stenting

- Not enough evidence
- Should be done only in a trial