How can KGH help you manage the TIA patient in your office?

Primary Care Stroke Update

Dr. Albert Jin

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Disclosures

- I have received honoraria from the SEO Regional Stroke Program
- I have not received any financial support or gift from any commercial enterprise.

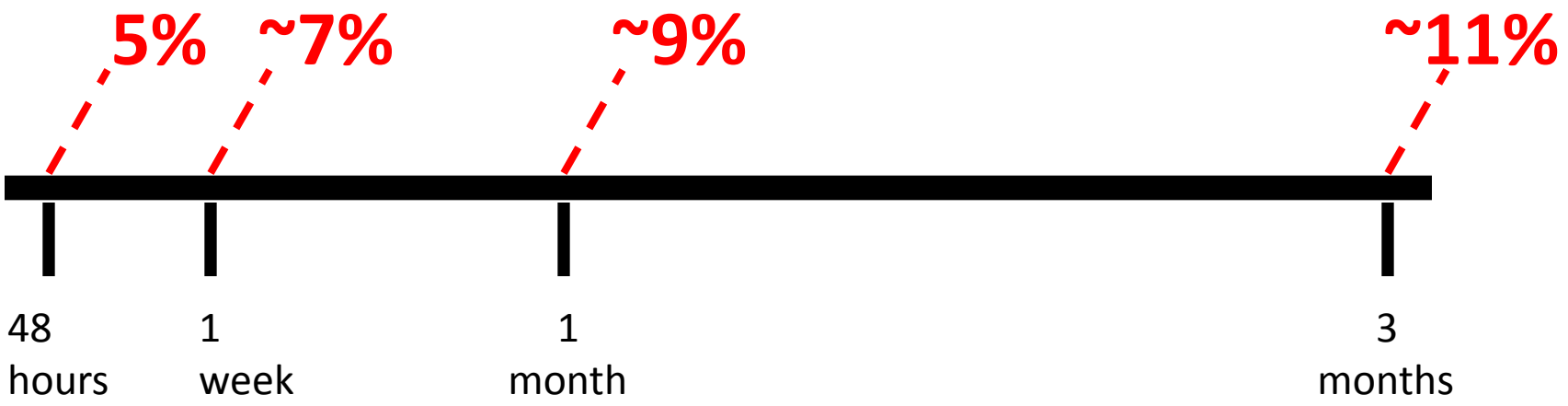
Objectives

- Review the principles of TIA triage as they may apply in an office setting
- Outline the TIA Collaborative Care Plans at KGH and how they may help with patient flow from the office to the ER or Stroke Prevention Clinic

TIA: The warning shot across the bow…

- TIA is a chance to change the patient's heading away from stroke, and towards improved vascular health

Risk of stroke after TIA



- Most of the risk is loaded up front within the first week
- *Therefore early intervention pays dividends, but late intervention doesn't*

Effect of urgent treatment of transient ischaemic attack and minor stroke on early recurrent stroke (EXPRESS study): a prospective population-based sequential comparison

Peter M Rothwell, Matthew F Giles, Arvind Chandratheva, Lars Marquardt, Olivia Geraghty, Jessica N E Redgrave, Caroline E Lovelock, Lucy E Binney, Linda M Bull, Fiona C Cuthbertson, Sarah J V Welch, Shelley Bosch, Faye Carasco-Alexander, Louise E Silver, Sergei A Gutnikov, Ziyah Mehta, on behalf of the Early use of Existing Preventive Strategies for Stroke (EXPRESS) study

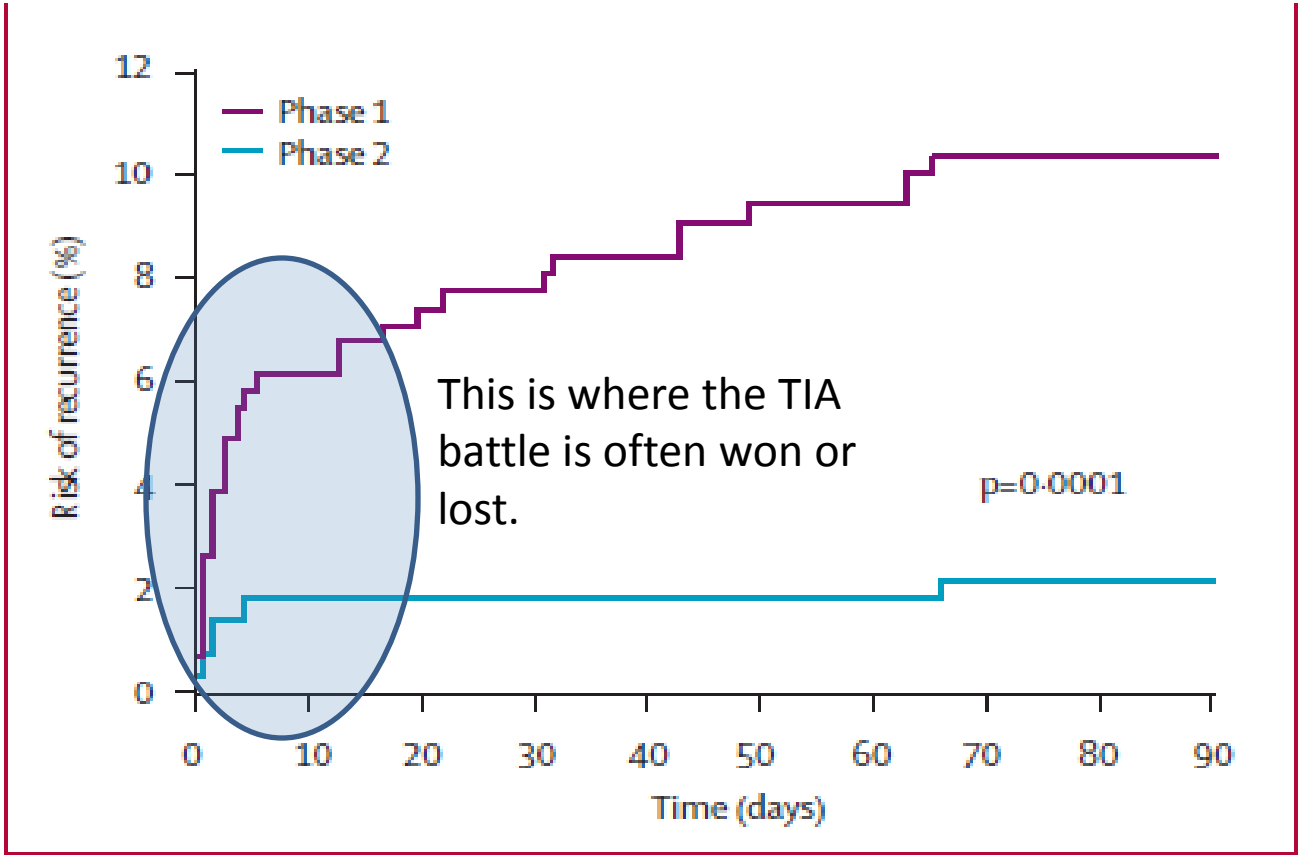


Figure 2: **Risk of recurrent stroke after first seeking medical attention in all patients with TIA or stroke who were referred to the study clinic**

What is the most dangerous TIA?

- Prediction rules such as the **ABCD2 system** are only partially effective
  - Good at raising awareness of risk factors
  - Bad at predicting stroke
    - Perry et al. CMAJ, July 12, 2011, 183(10)
- Degree of stenosis does not predict who is most at risk
  - In the NASCET study, patients with 50% stenosis were as likely to have stroke as those with 70% stenosis
    - Eliasziw et al. CMAJ 2004;170(7):1105-9

- **The most dangerous TIA is the one that has not been adequately worked up quickly**

TIA In An Ideal World

- Patient goes to ER immediately by ambulance
- CT or MRI, **carotid imaging** (CTA, MRA or Doppler), ECG
- Medications start *immediately* **in ER**:
  - **Antiplatelet agent**
  - **Statin**
  - **Anti-HTN drugs if sBP > 140**
- If needed, carotid endarterectomy is done within 24 hours

Successful TIA Management should be child's play, right?

Unfortunately, the real world is a little more complicated

TIA is not so straightforward

- Doctors lack clear, proven triage tools for TIA
- Patients don’t tell their doctor of the event
- Patients don’t go to ER when they have an event
- Patients and doctors often don’t have a sense of urgency because the symptoms have subsided

Do your patients (and sometimes fellow docs and nurses) leave you feeling like Darth Vader?

The need for better TIA management in Kingston

- In 2008, average wait time to be seen in clinic was 4 weeks
- Stroke recurrence at 90 days was 8.3% in 2008
- Time between TIA and carotid endarterectomy was over 80 days
- Clinic on two afternoons per week only

KGH response to TIA needs

- Revised TIA Collaborative Care Plans for KGH-ER and KGH Stroke Prevention Clinic to ensure that more TIA patients are seen quickly with neuroimaging
- Clarification of high-risk vs low-risk TIA
  - Who gets vascular imaging in the ER?
  - Who gets referred for carotid endarterectomy in the ER?
- More TIA clinics, more Stroke Clinic doctors, shorter wait time to be seen

How can KGH help you manage TIA?

- Any TIA less than 48 hours old should be sent to ER immediately, no matter how brief the symptoms
- TIA Clinics can now run **daily Mon-Fri** at KGH or HDH
- We will arrange vascular imaging for TIA less than one week old.
  - Please send us any recent bloodwork
  - CT angiography requires normal creatinine/eGFR

TIA Triage Wait Time Targets for Kingston

- **<u>Emergent</u>: Symptoms < 48 hrs ago.**
  - Patients are sent to KGH ER *immediately* for clinical assessment and neuroimaging
- **<u>Urgent</u>: Symptoms 48 hrs to < 3 months ago and no carotid imaging done, or atrial fibrillation not anticoagulated.**
  - Stroke Prevention Clinic within one week (we try to see within 3 days if possible)
  - We will try to complete the workup within one week of symptom onset if possible
  - If there is a recent Creatinine/eGFR please send to SPC; this will help us arrange a CT angiogram quickly
  - We will arrange neuroimaging to be done prior to or day of SPC visit

TIA Triage Target Wait Time

- **<u>Semi-Urgent</u> : Symptoms < 3 months ago, significant carotid artery stenosis ruled out by Doppler or CTA or MRA**
  - Stroke Prevention Clinic within one month
  - We can arrange further imaging as required
- **<u>Non-Urgent/Elective</u>: Symptoms > 3 months ago, CAS ruled out, A.Fib is treated**
  - Stroke Prevention Clinic within one to two months

Current TIA Wait Times in KGH Stroke Prevention Clinic (February 2013)

- Emergent cases are seen in ER **on the same day the referral is received**
- Urgent cases are now seen within **3 days** of receiving referral
- Semi-urgent cases are seen within **6 days**
- Non-urgent/elective cases are seen within **11 days**

Things we are working on…

- Carotid endarterectomy within 2 weeks of TIA or non-disabling stroke
- Better follow-up:
  - Does our clinic change the way people live?
  - Do patients undergo cognitive change after TIA?
  - Do patients become depressed?
  - How well are risk factors controlled at 90 days?

More TIA information can be found at…

- Canadian stroke best practice guideline:
  - http://strokebestpractices.ca

Conclusions

- TIA needs rapid work-up and intervention to prevent early stroke
- There needs to be greater support for primary care physicians to assess and treat their patients efficiently
- KGH Stroke Prevention Clinic is trying to do a better job of aligning with primary care needs, but there is still work that needs to be done
  - We will see your patients quickly, and arrange any necessary neuroimaging
  - You don’t have to do the work-up alone; we will help, so please refer as soon as there is suspicion for TIA!