Clinical Practice Assessment

Immediate or delayed evaluation & treatment for transient ischemic attacks?

Clinical Question:
For patients with acute TIA symptoms or minor stroke, does immediate versus delayed treatment result in improved patient outcomes?

Bottom Line:
Immediate evaluation and treatment is better. In the EXPRESS study, immediate treatment of TIA patients with the following agents was begun unless contraindicated: (1) aspirin 75 mg daily or clopidogrel if aspirin was contraindicated; (2) simvastatin 40 mg daily; (3) an ACE inhibitor with or without a diuretic if SBP was greater than 130 mmHg; and (4) anticoagulation therapy as required (e.g., atrial fibrillation). The study found a significant decrease in recurrent stroke within 90 days for immediate (median 1 day) treatment with these specific therapies versus delayed (median 20 days) treatment (ARR= 8.2%, NNT= 12).

Synopsis:
The concept of time sensitive management of acute stroke is not new. The use of thrombolytic agents is recommended for patient outcome advantages in acute stroke only if the drugs can be given within a three hour window of time from the onset of symptoms. It is also increasingly recognized that TIA’s represent instability in cerebrovascular disease and the risk of an acute stroke in a patient who has recently suffered a TIA event is increased. These concepts formed the basis of the EXPRESS Study.

EXPRESS was an 8-year prospective, population-based before-after study of delayed (Phase 1) versus immediate (Phase 2) management in a stroke specific clinic in Oxfordshire, England. In both phases the indications for referral from primary care sites in the area remained the same (i.e., patients with suspected TIA or minor stroke for whom the GP did not believe that hospitalization was required). Management included evaluation by a neurologist, immediate testing (e.g., CT to r/o hemorrhage; EKG), scheduled testing (e.g., carotid doppler; trans-thoracic or trans-esophageal echocardiograms when indicated) and treatment.

In Phase 1, the median time to evaluation was 3 days from time of referral; in Phase 2, the median was 1 day. In Phase 1, treatment recommendations were sent to the GP, who was expected to initiate them at a follow up visit. In Phase 2, treatment was initiated immediately, resulting in a decreased median time to first prescription of 1 day (Phase 2) from 20 days (Phase 1), P<.0001.

In Phase 1, 32 (10.3%) of 310 referred patients had recurrent stroke within 90 days, compared to 6 (2.1%) of 281 in Phase 2, adjusted hazard ratio 0.2 (95% confidence interval .08-.49; P=.0001). The authors concluded that early initiation of existing treatments after TIA or minor stroke was associated with an 80% reduction in the risk of early recurrent stroke.

Dean Neurology Department Statement

Sources:
Rothwell et al. on behalf of the Early Use of Existing Preventive Strategies for Stroke (EXPRESS) study. Effect of urgent treatment of transient ischaemic attack and minor stroke on early recurrent stroke (EXPRESS study): a prospective population-based sequential comparison. Lancet 2007; 370 1432-42 [Level 2 study]