London Cardiac and Stroke Networks

Summary of 4th May NSTEACS –defining high risk NSTEACS

Present - Huon Gray (Chair), Sotiris Antoniou, Andrew Archbold, Janet Lailey, Hilary Walker, Jamil Mayet, Kim Fox, Mark Whitbread, Phil McCarthy, David Brull, Nick Bunce, Roby Rakhit, Kevin Beats.

The meeting began with an overall introduction regarding its purpose, which was to define which patients are likely to benefit from early (defined as being within 24 hours of arrival in hospital) angiography with the option for follow-on PCI, in accordance with the recommendation made in the London Review's proposed models of cardiovascular care. Defining this high risk group will support A&E department triage of appropriate ACS patients (within 4 hours of arrival) and allow the London Ambulance Service (LAS) to plan for the additional inter-hospital transfers.

Discussion included the recently updated clinical guidelines from the American College of Cardiology (ACC) and American Heart Association (AHA) which now recommends patients who have a GRACE score of >140 (using the end point of Death/MI at 6 months) be considered for early angiography (<24 hours). However, using data from the recent NICE guideline (CG94) on NSTEMI and unstable angina, the group notedthat such a definition could encompass roughly 75% of all NSTEACS patients. The group concluded that the GRACE score was not appropriate as the sole determinant of triage.

Analysis presented did suggest that if a GRACE score of >160 were used as a cut off approximately 15% of the highest risk group NSTEACS would be identified. However, it was highlighted that GRACE is a marker for defining high risk, and not designed to be a marker for identifying patients who might benefit from early intervention. For instance, the GRACE score is significantly influenced by age of the patient, a factor which would not be appropriate as the principal determinant of clinical management. The remaining discussion therefore focussed on clinical markers which would identify those patients with NSTEACS most likely to benefit from early (<24 hours) intervention,. Experience from the NE London 'early ACS transfer' project was used to help inform the discussion.

Conclusion

The group recommended that the following criteria be used on arrival in A&E departments to identify patients with NSTEACS who should undergo angiography/PCI within 24 hours of arrival in hospital. For hospitals unable to offer immediate access to an interventional cardiac catheter laboratory these 'high risk' patients may require transfer to another hospital. Any hospital transfer should occur within 4 hours of arrival in A&E.

Recommendation 1

- Patients clinically suspected as having a non-ST elevation acute coronary syndrome (NSTEACS) with ongoing or recurrent chest pain/discomfort believed to be of cardiac origin, together with at least one of the following:
    - Persistent ECG changes of ST depression >1mm, or transient ST elevation
    - Pathological T wave inversion in V1-V4 suggesting an 'LAD syndrome'
    - Dynamic T wave inversion >2mm in two or more contiguous leads
    - Haemodynamic (eg: hypotension, pulmonary oedema or heart failure) or electrical instability (sustained ventricular arrhythmias – VT/VF) which are thought to be due to cardiac ischaemia.
    - Troponin ≥ 0.1mcg/L

The group stressed that the above statement should not override 'clinical judgement'. Any NSTEACS patient thought by the admitting hospital staff to be high risk or who potentially may benefit from early angiography/PCI should be discussed with the local cardiologists and, where appropriate, with the regional cardiac centre.

A formal risk scoring assessment (eg: GRACE score) should still be undertaken as part of the assessment on all patients admitted with UA/NSTEMI, in line with NICE guidance.

Recommendation 2

A phone call should be made to the receiving hospital, to allow discussion of the appropriateness of early angiography/PCI, taking account of factors increasing the risk of intervention, such as co-morbidities and bleeding risk. If the policy of early intervention/transfer for these patients proves successful then consideration could later be given to agreeing a policy of transfer without prior discussion. Having agreed inter-hospital transfer the referring hospital should initiate an "immediate transfer" with the LAS.