Current practice of antiplatelet and anticoagulation management in post-cardiac surgery patients: a national audit

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Abstract
The Audit and Guidelines Committee of the European Association for Cardio-Thoracic Surgery recently published a guideline on antiplatelet and anticoagulation management in cardiac surgery. We aimed to assess the awareness of the current guideline and adherence to it in the National Health Service through this National Audit. We designed a questionnaire consisting of nine questions covering various aspects of antiplatelet and anticoagulation management in post-cardiac surgery patients. A telephonic survey of the on-call cardiothoracic registrars in all the NHS cardiothoracic centres across the UK was performed. All 37 National Health Service hospitals in the UK with 242 consultants providing adult cardiac surgical service were contacted. Twenty (54%) hospitals had a unit protocol for antiplatelet and anticoagulation management in post-cardiac surgery. Only 23 (62.2%) registrars were aware of current European Association for Cardio-Thoracic Surgery guidelines. Antiplatelet therapy is variable in the cardiac surgical units across the country. Low-dose aspirin is commonly used despite the recommendation of 150–300 mg. The loading dose of aspirin within 24 h as recommended by the guideline is followed only by 60.7% of surgeons. There was not much deviation from the guideline with respect to the anticoagulation therapy.

Keywords: Antiplatelet • Anticoagulation • Aspirin

INTRODUCTION
The post-operative use of antiplatelet and anticoagulation therapy has been shown to improve the patency rate of saphenous vein grafts and to reduce the incidence of thromboembolic events, respectively. The Audit and Guidelines Committee of the European Association for Cardio-Thoracic Surgery (EACTS) recently published a guideline on antiplatelet and anticoagulation management in cardiac surgery. We aimed to assess the awareness of the current guideline and adherence to it in the National Health Service (NHS) through this National Audit.

MATERIALS AND METHODS
We designed a questionnaire consisting of nine questions covering various aspects of antiplatelet and anticoagulation management in post-cardiac surgery patients. The data were collected between 11 October and 31 October 2010. A telephone survey of the on-call cardiothoracic registrars in all the NHS cardiothoracic centres across the UK was performed and the questionnaires were completed. A typical survey lasted between 3 and 5 min.

RESULTS
All 37 NHS hospitals in the UK with 242 consultants providing adult cardiac surgical service were contacted. Twenty (54%) hospitals had a unit protocol for antiplatelet and anticoagulation management in post-cardiac surgery. Only 23 (62.2%) registrars were aware of the current EACTS guidelines. The results of antiplatelet (Table 1) and anticoagulation (Table 2) practice from the survey are tabulated.

DISCUSSION
The Audit and Guidelines Committee of the EACTS prepared a document presenting evidence-based recommendations around the issues of antiplatelet and anticoagulation management in cardiac surgery [1]. According to this, patients should be given aspirin within 24 h of coronary artery bypass grafting (Grade A recommendation based on level 1a and 1b studies). They also suggested that there is a trend towards maximal benefit of aspirin the sooner it is given post-operatively.

We observed varying practices in different hospitals across the country. We therefore carried out this audit to evaluate the practices across the country. Dunning et al. [1] have recommended a dose of 150–325 mg, but have suggested that there may be maximal benefit with 325 mg/day in the first year. Seventh ACCP Consensus Conference [2] in 2004, had recommended 75–325 mg of aspirin at 6 h and then 75–162 mg/day. In our hospital, the current protocol to give 300 mg of the loading dose of aspirin at 6 h following coronary artery bypass surgery, unless contraindicated. Subsequently, patients are commenced on 150

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BRIEF COMMUNICATION

mg of aspirin from the following day for at least 1 year post-operatively.

The EACTS guidelines [1] also recommend that antiplatelet therapy alone is adequate after tissue aortic valve replacement and in the absence of other indications for anticoagulation. They also found insufficient evidence to support or negate this recommendation of warfarinising for 3 months after tissue mitral valve replacement, unless there is another clear indication for anticoagulation such as atrial fibrillation.

This guideline presents the evidence-based approach to the use of antiplatelets and anticoagulation in patients undergoing cardiac surgery according to the most recently available data. The scope of guidelines is to help the attending physician to make a decision and the management of a specific patient should be taken according to the clinical situation.

**CONCLUSIONS**

Antiplatelet therapy is variable in the cardiac surgical units across the country. Low-dose aspirin is commonly used despite the recommendation is 150–300 mg. The loading dose of aspirin within 24 h as recommended by the EACTS guideline is followed only by 60.7% of surgeons. There was not much deviation from the guideline with respect to the anticoagulation therapy.

**LIMITATIONS**

This study is a telephone-based survey of the on-call cardiothoracic registrar on the day of survey. Thus, there is a theoretical possibility that the on-call registrar may not be fully aware about the hospital practices, hence a possible deviation in actual practices from that depicted here. The aim of the study is to have a snapshot of the current awareness of EACTS guidelines on antiplatelet and anticoagulation management in post-cardiac surgery patients and increase the same.

**Conflict of interest:** none declared.

**REFERENCES**
