

JHH Perioperative Service Local Guideline

Title

Preoperative ECG testing in the Pre Admission Clinic

Background

- A preoperative ECG can be obtained in asymptomatic patients without known cardiovascular disease, but it is rarely helpful.
- The rationale for obtaining a preoperative ECG comes from the utility of having a baseline ECG should a postoperative ECG be abnormal.
- For those patients who receive a preoperative ECG, it should be evaluated for the presence of Q waves or significant ST-segment elevation or depression, which raises the possibility of myocardial ischemia or infarction, left ventricular hypertrophy, QTc prolongation, bundle-branch block, or arrhythmia.
- Some ECG abnormalities seem to be associated with a worse prognosis in observational studies, but the association is inconsistent across studies.
- ECG abnormalities are not part of either the revised cardiac risk index (RCRI) or the National Surgical Quality Improvement Plan (NSQIP) because of the lack of prognostic specificity associated with these findings.

Guideline

The following patients should have a resting ECG in the Pre Admission Clinic prior to elective surgery.

A previous ECG (electronic medical records - CAP or DMR) may be appropriate from the:

- past 12 months if stable and no change in clinical status OR
- past 3 months if unstable with symptoms or hospital admissions

- All patients \geq 65 years
- OR**
- Any age patient with possible cardiac disease:
 - Ischaemic heart disease, chest pain or shortness of breath
 - Arrhythmia or palpitations
 - Structural heart disease eg. Valvular heart disease
 - Heart failure
- OR**
- At clinician request

Consultation

Perioperative service medical and nursing staff

References

1. <https://www.uptodate.com.acs.hcn.com.au/contents/evaluation-of-cardiac-risk-prior-to-noncardiac-surgery/abstract/9>
2. <https://www.nice.org.uk/guidance/ng45/resources/routine-preoperative-tests-for-elective-surgery-pdf-1837454508997>
3. 2014 ACC/AHA Guideline on Perioperative Cardiovascular Evaluation and Management of Patients Undergoing Noncardiac Surgery. Lee A. Fleisher, Kirsten E. Fleischmann, Andrew D. Auerbach, Susan A. Barnason, Joshua A. Beckman, Biykem Bozkurt, Victor G. Davila-Roman, Marie D. Gerhard-Herman, Thomas A. Holly, Garvan C. Kane, Joseph E. Marine, M. Timothy Nelson, Crystal C. Spencer, Annemarie Thompson, Henry H. Ting, Barry F. Uretsky, Duminda N. Wijeyesundera. J Am Coll Cardiol. 2014 Dec, 64 (22) e77-e137.

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