

Echocardiogram testing in the Preoperative Clinic

- Do not routinely order echocardiography in stable patients.

- Consider resting echocardiography if the person has:
 - a heart murmur without documentation and appropriate follow up of severity
 - Dyspnoea of unknown origin
 - Signs or symptoms of heart failure
 - Previously documented LV dysfunction and no assessment within a year

Comments (see AHA Guidelines 2014)

- The relationship between measures of resting LV systolic function (most commonly LVEF) and perioperative events has been evaluated in several studies of subjects before noncardiac surgery.
- These studies demonstrate an association between reduced LV systolic function and perioperative complications, particularly postoperative HF. The association is strongest in patients at high risk for death.
- Complication risk is associated with the degree of systolic dysfunction, with the greatest risk seen in patients with an LVEF at rest <35%. A preoperatively assessed low EF has a low sensitivity but a relatively high specificity for the prediction of perioperative cardiac events. However, it has only modest incremental predictive power over clinical risk factors.
- The role of echocardiography in the prediction of risk in patients with clinical HF is less well studied.
- A cohort of patients with a history of HF demonstrated that preoperative LVEF <30% was associated with an increased risk of perioperative complications.
- Data are sparse on the value of pre- operative diastolic function assessment and the risk of cardiac events.

References

1. NICE guidelines routine preoperative tests for elective surgery :
<https://www.nice.org.uk/guidance/ng45/resources/routine-preoperative-tests-for-elective-surgery-pdf-1837454508997>
2. 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.