Preoperative testing for Cataract and other Low Risk Procedures

Introduction
There are over 35 million low risk surgeries performed in the United States annually, including over 1.5 million cataract surgeries. For every one of these, a history and physical is required within thirty days before the procedure. The preoperative evaluation adds a layer to the history and physical by focusing on a systems based risk assessment of the patient undergoing the procedure. Often, tests are ordered to help the clinician determine the risk involved. However, many tests have not been shown to provide benefit.

Cataract Surgeries
The risk of morbidity and mortality with cataract surgery is extremely low. In fact, the CDC estimates a serious complication rate of 0.5%. Because most patients undergoing such procedures are elderly and have serious co-morbidities, many undergo testing for preoperative risk assessment. One study estimated that this costs Medicare approximately 150 million dollars annually. (1)

A large randomized study of over 18,000 patients undergoing cataract surgery found that preoperative testing resulted in no improvement in outcomes or decrease in peri-operative complications. (1) Outcomes from this study are also supported by the Agency for Healthcare Research and Quality (AHRQ). (3) The Institute for Clinical Systems Improvement (ICSI) has identified eliminating ECGs before cataract surgeries as one of their quality improvement aims surrounding the preoperative evaluation. (4)

HealthPartners is in the process of updating the preoperative smart sets and recommends no routine testing before cataract surgery.

Low Risk Procedures
Low risk surgeries are those procedures with an inherent cardiac risk of less than 1%. Patients undergoing low risk procedures generally do not require extensive preoperative testing because it will not change periprocedure clinical management.
Laboratory testing before low risk procedures should only be done in selected patients. Electrolytes and kidney function tests are only needed in patients on certain medications, such as diuretics or ace inhibitors, or in those with known chronic kidney disease. Hemoglobin does not need to be done unless there is a concern that the patient has anemia or has a history of anemia.

There is no consensus on when an ECG should be done before a low risk procedure. Studies have not shown that obtaining a preoperative ECG decreases perioperative complications. ICSI states it is reasonable to obtain preoperative ECGs for low risk procedures in those patients who are over 65 or those with diabetes, hypertension, chest pain, congestive heart failure or peripheral vascular disease. ECG should also be considered in patients who are unable to exercise. (4)

Regardless of the results of the ECG, in asymptomatic patients both the American College of Cardiology and the American Board of Internal Medicine Choosing Wisely Campaign do not recommend the use of cardiac stress imaging or advanced non-invasive imaging for low risk non-cardiac surgery as it does not alter patient outcomes. (2)

**Clinical Judgment**

As in all encounters with patients, testing based upon the patient’s current clinical situation is always warranted. Preoperative assessments have sometimes been use to readdress medication compliance, poly pharmacy, diabetes, high risk behaviors, preventive screening, etc. Women of childbearing age should also be considered for pregnancy testing. While testing may be necessary for these clinical situations, routine testing preoperatively is not likely to impact the risk for cataract or low risk surgeries.

**References**


4. [https://www.icsi.org/_asset/7y87p4/Preop.pdf](https://www.icsi.org/_asset/7y87p4/Preop.pdf)

**Questions:** Please reply to this e-mail, and your questions(s) will be directed to the authors of this Pearl, Sarah D’Heilly, MD and Jerome Siy, MD.

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