Is too much preoperative testing being done for ambulatory surgery patients? New research suggests testing practices may need a close look. “If anesthesiologists are just ordering tests as a routine, they need to look at our study and re-examine what they’re doing,” advises Frances Chung, FRCPC, a well-known researcher in ambulatory anesthesia.

In the new pilot study, Dr Chung and her colleagues evaluated whether preoperative testing can be eliminated in healthy ambulatory surgery patients without an increase in adverse events. Savings for the health care system could be significant. About 65% to 70% of surgery is outpatient, and preoperative testing in the US is estimated to cost more than $18 billion a year.

First randomized trial

Though preoperative testing for ambulatory surgery has been debated for almost 30 years, the study is the first prospective, randomized, controlled trial to assess if such testing can be eliminated for ambulatory surgery patients.

An American Society of Anesthesiologists (ASA) 2002 practice advisory states that preoperative tests should not be ordered routinely but may be ordered, required, or performed selectively to guide or optimize perioperative management.

Case series reports have suggested that even indicated testing may be unnecessary in healthy ambulatory surgery patients. An indicated test is one ordered for a specific clinical indication or purpose.

Because the new study is small (1,026 patients), Dr Chung says results should be considered preliminary. In addition, the study had strict exclusion criteria and did not include patients with major medical issues, especially related to cardiac and respiratory disease, such as patients who had a myocardial infarction within 3 months before surgery.

Still, the findings add another important piece of evidence on the merits of preoperative testing.

Study protocol

The researchers randomized the 1,026 patients to 2 groups:

- indicated testing: 527 patients
- no testing: 499 patients.

The testing group had a complete blood count (CBC), electrolytes, blood glucose, creatinine, electrocardiogram (ECG), and chest x-ray, as indicated by the Ontario Preoperative Testing Grid, consensus guidelines used by hospitals in Ontario, Canada.

No tests were ordered for the no-testing group. Patient age, gender, type of surgery, anesthesia, and ASA physical status were similar for the 2
groups. Most patients were ASA P1 or P2, and 12% of patients in each group were ASA P3.

No significant differences

No significant differences were found between the groups in rates of perioperative adverse events within 7 and 30 days after surgery. Most events were not serious. More patients in the testing group returned to the hospital within 7 days. The main reasons were severe pain, infection, and urinary retention.

In the no-testing group, none of the adverse events was associated with patients not having preoperative testing.

Cost savings were US $14,800 ($30.90 per patient) in the no-testing group.

Little need for testing

Because of the sample size, the findings aren’t strong enough to warrant changing preoperative testing protocols, notes Dr Chung, who is professor of anesthesiology at the University of Toronto and medical director of the ambulatory surgical unit and combined surgical unit at Toronto Western Hospital.

The authors say their findings justify a large multicenter study, which is not underway at this time.

Because most study patients were ASA P1 and P2, the findings apply primarily to those 2 groups, though Dr Chung says the findings can also apply to stable patients with higher ASA classifications. The testing decision also depends on the type of surgery. For example, she says testing is not ordered for cataract patients even if they are ASA P3 or P4.

Toronto Western Hospital has changed its practice since the study, she notes, though some preoperative testing is still being done. For example, chest x-rays are not ordered for all patients who are heavy smokers and have pulmonary disease. ECGs aren’t ordered for all patients over age 45 with a cardiac history or hypertension.

“We should encourage anesthesiologists to consider changing their practice in preoperative testing. This study helps them in understanding that there is not a lot of need for testing,” she says. ✤

—Judith M. Mathias, RN, MA

References


Better screening needed for ASC patients

Patients who are not properly assessed before procedures in ambulatory surgery facilities are at risk for postoperative complications and hospitalization, according to the Pennsylvania Patient Safety Authority.

Of 467 events submitted to the Authority from 2004 through 2008, 43% were serious, most often requiring patients to be transferred to a hospital. Half of reports involved patients over age 65, and 5% involved a pediatric patient.

More than one-fourth (27%) of the facilities showed a need for improved
screening. In 85 reports, the patient had a condition such as an arrhythmia or sleep apnea that might have put the patient at risk during the procedure.

“Our data shows many ambulatory surgical facilities need to improve their screening and assessment processes,” said the authority’s executive director, Mike Doering.

He added that patients can help by telling their providers about conditions they have, such as heart or respiratory problems.

The report offers risk reduction strategies. Two sample preoperative screening tools are posted on the authority’s website:

• a health history sample
• a nursing preoperative screening sample form.

—www.patientsafetyauthority.org/NewsAndInformation/PressReleases/Pages/pr_2009_March_31.aspx