Association between obstructive sleep apnea and postop delirium

Postoperative delirium is a common complication in the elderly and is associated with increased morbidity and mortality. Recently postoperative delirium has been linked to long-term cognitive and functional decline.

This prospective study from Duke University Medical Center, Durham, North Carolina, was undertaken to examine whether any preexisting medical conditions in a cohort of elderly patients undergoing knee replacement surgery contribute to postoperative delirium.

Of 106 patients enrolled in the study, 27 (25.5%) developed postoperative delirium. No difference was found between patients who received general vs regional anesthesia.

More than half (53%) of patients with obstructive sleep apnea experienced postoperative delirium, compared with 20% of patients without sleep apnea. Multivariate analysis showed obstructive sleep apnea to be the only statistically significant predictor of postoperative delirium.

The researchers concluded that obstructive sleep apnea was associated with a more than fourfold increased risk for postoperative delirium and was the only baseline clinical factor associated with postoperative delirium in multivariate models.

An accompanying editorial calls the finding that obstructive sleep apnea is associated with postoperative delirium, a “novel” one. If confirmed in further studies, this association may have major implications for anesthesiology.


Anesthesia services for gastroenterology procedures doubles

The continuous increase in healthcare spending has triggered a debate on which services and procedures provide adequate value and which do not, therefore representing potential opportunities to reduce costs. The use of anesthesiologists, nurse anesthetists, or both during gastrointestinal (GI) endoscopies and colonoscopies has been identified as one such potential opportunity.

The frequency with which anesthesia personnel provide sedation for gastroenterology procedures, especially for low-risk patients, is poorly understood. Analyzing Medicare and commercial insurance claims data from 2003 to 2009, researchers from the Rand Corporation examined the proportion of outpatient GI endoscopy and colonoscopy procedures that were assisted by anesthesia personnel and the associated payments for their services.

During this time period, the use of anesthesia services for these procedures increased from 14% to 30%. More than two-thirds of anesthesia services were delivered to low-risk patients, and there was substantial regional variation in use. Because of the increase in anesthesia services, payments doubled in Medicare patients and quadrupled in commercially insured patients.

The authors concluded that between 2003 and 2009, the use of anesthesia services during outpatient endoscopies and colonoscopies increased substantially.

Though the addition of anesthesia fees increases total procedure costs, insisting that healthy people use moderate sedation rather than anesthesia or deeper sedation during colonoscopies might cause those who are leery of discomfort to skip the procedure altogether, increasing the risk for colon cancer, an editorial notes.

**Occupational hazards**

**Benefits of double gloving during surgery**

The risk of exposure to bloodborne pathogens continues to be a major concern for OR personnel. Double gloving is used by some for added protection. The use of color-coded double gloving, such as wearing a dark glove against the skin and a light-colored glove on top, is believed to make it easier to see when a glove has been breached because of the contrasting colors.

In this study, nurse researchers examined the effect of double gloving with different colored gloves on the durability of inner gloves and the detection of glove tears during surgery. Data were collected over a 2-year period from 264 residents, 164 RNs, 130 surgeons, 72 fellows, and 72 surgical technologists from 3 East Coast medical centers.

Seeing blood on the hand after surgery was more frequent with single gloving than double gloving. The frequency of changing gloves during surgery was significantly higher among those who double gloved with dark-colored gloves against the skin than those who double gloved with same-colored gloves. There was no difference in the feeling of needle sticks or seeing a hole in the glove between those who wore same-colored or different-colored gloves.

The findings demonstrate the importance of double gloving as a tool to further enhance protection of patients and health care providers during surgery, the researchers concluded. The use of a dark-colored glove against the skin can increase protection because it alerts the surgical team member when a glove defect occurs.


**Patient safety**

**Relationship between BMI and postop mortality**

Studies indicate that obesity is associated with a 20-year decrease in average life expectancy.

This study from the University of Virginia, Charlottesville, examines the relationship between obesity (as measured by body mass index [BMI]) and surgical mortality. Patient data included nearly 190,000 general and vascular surgical procedures reported in the American College of Surgeons National Surgical Quality Improvement Program.

Rather than obesity, however, a lower BMI was found to be a significant predictor of mortality within 30 days of surgery. The results held even after adjusting for type of surgery and a patient’s overall expected risk of death.

Patients with a BMI less than 23.1 had a 40% higher odds of death compared with patients in the middle range for BMI (26.3 to <29.7). Overweight patients with a BMI of 29.7 or greater had lower
odds of death than patients in the middle range, but the differences were not statistically significant.

The researchers concluded that a lower BMI is a significant predictor of postoperative mortality. Patients with higher BMIs had lower odds of death.


http://archsurg.ama-assn.org

Surgical Site Infections

National standard for SSI reporting needed

No national requirement for measuring or reporting hospital surgical site infection (SSI) rates exists, and state-level monitoring occurs with little coordination among states.

In this study, researchers from Johns Hopkins University, Baltimore, examine the current state legislation on SSI monitoring and reporting in all 50 states.

A total of 21 states have legislation requiring SSI monitoring and reporting; all 21 require public release of findings. Of these, 8 currently have SSI data publicly available with a range of 2 to 7 procedures reported.

The researchers concluded that the wide variation in state reporting of SSIs isn’t working. It may be time for a national standard for reporting so consumers can make informed choices based on quality metrics.


Alcohol-CHG superior to alcohol-only hand antiseptics in persistent activity

Reducing the risk of surgical site infections involves multiple strategies. One such strategy is to prevent contamination of the wound by microorganisms on the hands of surgical team members. This is accomplished by means of the surgical hand scrub and the use of sterile gloves.

The introduction of waterless, brushless surgical hand antiseptics allows for shorter surgical hand preparation time, less skin damage, and lower costs.

This study from 3M Corporation compares the persistent antimicrobial activity of 3 waterless, brushless alcohol-based surgical hand antiseptics, including
After 6 hours of glove wear, the 61% alcohol-based hand antiseptic containing 1% CHG (Avagard Surgical and Healthcare Personnel Hand Antiseptic with Moisturizers, 3M, St Paul, Minnesota) showed superior persistent activity to the other 2 alcohol-only formulations. The other products were Sterillium Rub Surgical Hand Antiseptic (Bode Chemie, Hamburg, Germany) and Surgicept Waterless Surgical Hand Antiseptic (CareFusion, San Diego, California). All 3 products showed similar efficacy immediately after use.

The researchers concluded that using an alcohol-based surgical hand antiseptic containing CHG appears to be the most appropriate choice for maintaining microbial levels as low as possible for as long as possible.


Transcatheter valve replacement vs medical therapy for inoperable aortic stenosis

Transcatheter aortic-valve replacement (TAVR) is recommended for patients with severe aortic stenosis who are too sick for open-heart surgery. However, patient outcomes beyond 1-year are not known.

The objective of this analysis by investigators with the Placement of Aortic Transcatheter Valves (PARTNERS) trial was to report 2-year findings from the trial that involved 358 patients at 21 medical centers. Patients were randomized to receive either TAVR or standard medical therapy (which also could include balloon aortic valvuloplasty).

At 2 years, 68% of patients who received standard medical therapy had died, compared to 43.3% of patients who received TAVR. The rate of rehospitalization was 35% in the TAVR group and 72.5% in the standard therapy group. TAVR patients also had an improved functional status. However, patients who underwent TAVR had a higher risk of stroke than the standard therapy group—13.8% vs 5.5%.

The investigators concluded that patients with aortic stenosis who are too sick for open surgery have better survival rates and an improved quality of life after TAVR compared with standard medical therapy. These results establish TAVR as the standard of care for patients with aortic stenosis who do not have surgical alternatives. The ultimate value of TAVR in such patients will depend on a further reduction in the risk of complications, especially strokes.


http://www.nejm.org

Long-term effectiveness of PCI vs CABG

Questions remain about the comparative long-term effectiveness of percutaneous coronary intervention (PCI) and coronary bypass grafting (CABG) for treating coronary artery disease.

Analyzing data on Medicare patients treated between 2004 and 2008, researchers with the Comparative Effectiveness of Revascularization Strategies (ASCERT) study compared the rates of long-term survival after PCI (103,549 patients) and CABG (86,244 patients) procedures.

At 1 year, there was no significant difference in mortality between the 2 groups—6.24% for CABG and 6.55% for PCI patients. At 4 years, there was lower mortality for CABG (16.4%) than PCI (20.8%).

The researchers concluded that in older patients with multivessel coronary disease, a long-term sur-
vival advantage was found for those who underwent CABG procedures compared with less-invasive PCIs.


http://www.nejm.org

Bariatric surgery vs medical treatment for diabetes

Physicians have noticed for years that weight-loss surgical procedures could sometimes get rid of type 2 diabetes in patients, but they had no hard data.

In 2 separate studies, researchers from Catholic University in Rome and the Cleveland Clinic compared bariatric surgery procedures with medical therapy for the treatment of type 2 diabetes. Neither study involved the Lap Band.

Researchers from the Catholic University in Rome compared Roux-en-Y gastric bypass (20 patients) or biliopancreatic diversion (20 patients) procedures with conventional medical treatment (20 patients). After 2 years, the surgical patients had complete remission rates of 75% for Roux-en-Y and 95% for biliopancreatic diversion. There were no remissions in patients who received medical treatment.

The Cleveland Clinic study compared Roux-en-Y gastric bypass (50 patients) or sleeve gastrectomy (49 patients) plus medical therapy with intensive medical therapy alone (41 patients). The remission rates 1-year after surgery were 42% for Roux-en-Y and 37% for sleeve gastrectomy patients. The intensive medical therapy led to remissions in 12% of patients.

Most surgery patients were able to discontinue all diabetes medication and maintain disease remission for the study periods. Surgery also helped many patients to lower their blood pressure and cholesterol.

The researchers from both studies concluded that bariatric surgery provides substantially better glycemic control than standard medical treatment of type 2 diabetes in obese patients.

An accompanying editorial predicts that the studies findings will have a major effect on diabetes treatment.


http://www.nejm.org
American Association of Blood Banks

Red Blood Cell Transfusion: A Clinical Practice Guideline. A new guideline for red blood cell transfusion from the American Association of Blood Banks recommends that transfusions be considered at a hemoglobin of 7 to 8 g/dL for stable adults and children. Though physicians commonly use hemoglobin concentrations to determine when to transfuse a patient, most guidelines recommend that transfusions be given for anemia and not be based on hemoglobin concentrations alone.

This more restrictive approach not only saves blood but reduces the costs related to unnecessary transfusions and exposure of patients to infectious or noninfectious risks.

[http://www.annals.org/content/early/2012/03/26/0003-4819-156-12-201206190-00429.full](http://www.annals.org/content/early/2012/03/26/0003-4819-156-12-201206190-00429.full)

Society for Cardiovascular Angiography and Interventions

Clinical Expert Consensus Statement on Best Practices in the Cardiac Catheterization Laboratory. The Society for Cardiovascular Angiography and Interventions has issued, for the first time, a document defining best practices in the cardiac catheterization lab. The expert consensus statement is aimed at interventional cardiologists and other staff performing procedures in the cath lab. Best practices are divided into 3 categories: before, during, and after the procedure.

Among the recommendations:
- assemble an optimal team and ensure competence and documentation of outcomes
- institute a preprocedure checklist
- receive an informed consent from the patient
- perform a time-out
- communicate the results of the procedure to the patient.

The consensus statement provides a benchmark for cath labs to base their current practices on and help set future goals to elevate the standard of patient care.

[http://www.scai.org/Press/detail.aspx?cid=01b863d3-e557-4e57-8d55-6c0a5f52d50a](http://www.scai.org/Press/detail.aspx?cid=01b863d3-e557-4e57-8d55-6c0a5f52d50a)

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