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## MAKING THE ROUNDS

### PRACTICE MANAGEMENT

#### Benefits Seen With Acute Care Surgery Services

Eastern Virginia Medical School researchers have found that implementation of an acute care surgery service appears to be positive. The study team introduced such a service in a prearranged, dedicated rotation by critical care-trained surgeons to address all ED, inpatient, and transfer consultations. The service was found to facilitate the ability to provide more timely care.

Source: *Journal of the American College of Surgeons*, October 2009.

### CLINICAL UPDATE

#### The Role of HBV After Hepatectomy for HCC

Infection with hepatitis B virus (HBV) appears to be a strong predictor for lower recurrence-free survival after hepatectomy for a single nodule of hepatocellular carcinoma (HCC) of 5 cm or smaller in patients with cirrhosis, according to an Italian study. The authors report that patients who are seropositive for HBV with poorly differentiated HCC should be considered at high risk of recurrence and possibly undergo salvage liver transplantation.

Source: *Archives of Surgery*, October 2009.

#### Drug-Eluting Stents Prone to Fracture

The incidence of fractures with drug-eluting stents appears to be 29% lesions, according to an analysis of autopsy reports. Investigators noted that their findings were significantly higher than what has previously been reported. They observed a high rate of adverse pathologic findings in lesions with grade V stent fracture.

Source: *Journal of the American College of Cardiology*, November 17, 2009.

### MEDICAL HORIZONS

#### Artificial Pancreas Helps After Pancreatic Resection

Perioperative use of an artificial endocrine pancreas to control pancreatogenic diabetes after pancreatic resection appears to be an easy and effective way to maintain near-normal blood glucose levels, according to a small Japanese study. The research team reported that the artificial pancreas is promising for use as insulin treatment for patients with pancreatogenic diabetes after pancreatic resection.

Source: *Archives of Surgery*, October 2009.

### READING ROOM

#### Assessing the Impact of Hospital Quality

HealthGrades has released its 12th Annual Hospital Quality in America Study, which examined nearly 40 million Medicare hospitalization records for 2006 through 2008. The study, available at [www.healthgrades.com](http://www.healthgrades.com), found a wide gap in quality between the nation's best hospitals and all others.

Source: HealthGrades.

### CONFERENCE HIGHLIGHTS

## The 2009 Veith Symposium

*The 2009 Veith Symposium was held in New York City from November 18 to 22. The features below highlight some of the news emerging from the meeting.*



Content reviewed by: **Frank J. Veith, MD**

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### Comparing EVAR & Open Repair for Ruptured AAAs

**The Particulars:** Case and single center reports have documented the feasibility of endovascular aneurysm repair (EVAR). Some investigations have reported the effectiveness of EVAR for ruptured abdominal aortic aneurysms (AAAs), but the role and value of such treatment remain controversial.

**Data Breakdown:** Investigators examined a collected experience with use of EVAR for the treatment of ruptured AAAs from 49 centers using data on patients treated by EVAR or by open repair. The 30-day mortality in the EVAR group was 19.7% compared with a 36.3%

rate for those treated with open repair. Supraceliac aortic balloon control was obtained in 19.1% ± 12.0% of EVAR-treated patients. Abdominal compartment syndrome was treated by some form of decompression in 12.2% ± 8.3% of EVAR patients.

**Take Home Pearls:** EVAR of ruptured AAAs appears to be superior to open repair in patients with favorable anatomy and in centers with access to vascular surgeons. Adequate skills, facilities, and protocols must be available, and optimal strategies, techniques, and adjuncts should be employed.

### A Promising Treatment for Chronic DVT

**The Particulars:** DVT affects 600,000 patients each year and is accountable for approximately 100,000 deaths. About 30% of patients with DVT will suffer from a recurrent episode of it within 10 years, with the greatest risk occurring in the first 2 years. Therapy for lower extremity DVT has been aimed at preventing more thrombus and the occurrence of pulmonary embolism and recurrent DVT, but few treatment options are available for chronic DVT.

**Data Breakdown:** Researchers presented a series of 50 patients with chronic, hard, and occlusive DVT who were suffering from post-thrombotic syndrome (PTS). Pa-

tients were successfully treated with the EkoSonic ultrasound (EKOS Corp.), a device that utilizes endovascular techniques to restore flow and reduce symptoms related to PTS. The EKOS ultrasound assisted thrombolysis, in addition to standard angioplasty and stenting techniques, and appears to lead to successful venous recanalization and patency with improved venous outflow.

**Take Home Pearl:** The ability to successfully recanalize chronically occluded venous segments in DVT patients with PTS appears to benefit patients by reducing symptoms and improving quality of life.

### Evaluating Safety of Carotid Procedures

**The Particulars:** Carotid stenting (CAS) and carotid endarterectomy (CEA) are two procedures that have been used to treat patients with symptomatic carotid stenosis, but little data are available regarding which procedure is safer.

**Data Breakdown:** A randomized comparison of CAS and CEA in symptomatic patients was conducted in a multicenter, randomized trial. Aspirin plus clopidogrel were provided prior to stenting. The primary endpoint was the 30-day rate of any stroke, myocardial infarction, or death. An intention-to-treat analysis

for primary short-term outcome found that 8.5% of the CAS group experienced any endpoint event compared with a 5.1% rate for the CEA group (hazard ratio, 1.73). There were twice as many strokes after CAS than after CEA in the per protocol analysis (7.0% vs 3.3%). This difference in outcome was largely driven by non-disabling stroke.

**Take Home Pearl:** CEA appears to be safer than CAS in patients with symptomatic carotid stenosis and is the treatment of choice for suitable individuals.

### Managing Small AAAs

**The Particulars:** The PIVOTAL trial (Positive Impact of Endovascular Options for Treating Aneurysms Early) involved 728 patients with small aortic abdominal aneurysms (AAAs)—ranging from 4 cm to 5 cm in diameter—to receive either early endovascular repair or ultrasound surveillance. The goal of the trial was to determine if small AAAs should be treated with less morbid methods of repair.

**Data Breakdown:** After a mean follow-up of 20 ± 12 months, there were 15 deaths in each of the randomized patient groups. Aneurysm rupture or aneurysm-related

death occurred in two patients in the early endovascular repair group (0.6%) and two patients in the surveillance group (0.6%).

**Take Home Pearls:** The mortality rate of early endovascular repair for small AAAs appears to be similar to that of ultrasound surveillance. Until longer follow-up data become available, repair of small AAAs should be individualized. Decisions should be based on patient preference, endovascular expertise of surgical teams, and the likelihood that patients will comply with rigorous follow-up imaging.

### Detecting Thoracic Aortic Aneurysms

**The Particulars:** Thoracic aortic aneurysms (TAAs) are often asymptomatic and associated with high mortality rates. The ability to detect TAAs by a blood test could facilitate early intervention, thus preventing further growth and complications.

**Data Breakdown:** Researchers tested a new technique to detect TAAs using a blood test to examine gene expression in peripheral blood cells. A model consisting of 41 genes was constructed and applied to patients with and without TAAs. The system achieved an accuracy of 80% in the classification of patients with and without TAAs.

**Take Home Pearls:** Detection of TAAs using a blood test that examines gene expression in peripheral blood cells appears to accurately classify patients with and without these aneurysms. These genes appear to be potential diagnostic markers that could facilitate the early detection of TAAs.

*Frank J. Veith, MD, has indicated to Physician's Weekly that he owns stocks, stock options, or bonds in Vascular Innovations.*

*For more information on the annual meeting news emerging from the 2009 Veith Symposium, as well as further data on the studies presented in this feature story, go to [www.veithsymposium.org](http://www.veithsymposium.org).*

### Improving Breast Cancer Survival

**W** Immediate breast reconstruction after mastectomy appears to be associated with decreased breast cancer-specific mortality, particularly among younger women, according to an international study. The authors believe the association was more likely attributable to imbalances in socioeconomic factors and access to care than to inadequate adjustments for tumor characteristics and disease severity. They add that more research is needed to identify additional prognostic factors that may be responsible for the improved cancer survival among women undergoing immediate postmastectomy reconstruction.

### Tai Chi Reduces OA Knee Pain

**W** Investigators in Boston have found that Tai Chi appears to reduce pain and improve physical function, self-efficacy, depression, and health-related quality of life for knee osteoarthritis (OA). In an analysis of 40 patients, participants were randomly assigned to 60 minutes of Tai Chi or attention control twice weekly for 12 weeks. Those partaking in Tai Chi exhibited significantly greater improvement in pain scores and physical function. Chair stand time, depression scores, and self-efficacy scores were also higher in the Tai Chi group. No severe adverse events were observed in the study.

Source: *Arthritis Care & Research*, November 2009.

### Catheter-Directed Therapy Treats PE

**W** A systematic review from researchers in California has found that modern catheter-directed therapy (CDT) appears to be a relatively safe and effective treatment for acute massive pulmonary embolism (PE). A pooled analysis of 35 studies showed that the clinical success rate from CDT—defined as stabilization of hemodynamics, resolution of hypoxia, and survival to hospital discharge—was 86.5%. Pooled risks of minor and major procedural complications were 7.9% and 2.4%, respectively. At experienced centers, the authors recommend that CDT be considered as a first-line treatment for patients with massive PE.

Source: *Journal of Vascular and Interventional Radiology*, November 2009.

### IN MY OPINION

## Minimizing Distress in Children Before Surgery



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**M**ore than 3 million children in the United States have major surgery every year, and these procedures often require them to undergo general anesthesia. The prospect of surgery is stressful regardless of the patient's age, but doctors need to be particularly sensitive when patients are children. The entire surgical team should work closely together and with the child's parents to minimize the stress and trauma that they may face before and after surgery.

The preoperative process is particularly critical. Much of the anxiety and trauma children experience after surgery is because of the procedures we put them through prior to their operation, from giving them shots to putting masks on their faces to deliver the anesthetics. It's estimated that 50% of children who have major surgery suffer some sort of postoperative behavioral changes after their operation, including night terrors and other longer-lasting emotional issues.

#### Make Efforts to Minimize Impact

Doctors can take simple steps toward minimizing the emotional distress that children face before and after surgery:

**1** Spend time with parents before the surgery. Explain precisely what will happen and when it will happen. Include details on when and how anesthesia will be administered, and how it could affect their child's behavior after the operation. Many children experience "emergence delirium," where they are thrashing, crying, and inconsolable, which can be terrifying for parents. To circumvent this, describe details on expectations to alleviate postoperative stress. Also ensure that parents are active participants preoperatively.

**2** Minimize trauma from needles and anesthesia masks. If possible, give children oral midazolam about 30 minutes prior to surgery so that they are comfortable and relaxed prior to separation from their parents and induction of anesthesia. Permit parents into the operating room so they can comfort children before surgery begins and keep them relaxed as anesthesia is administered. While this may not reduce anxiety, it can increase parent and child satisfaction significantly.

**3** Talk to parents about possibly using melatonin before surgery to minimize emergence delirium. A study my colleagues and I published in *Anesthesiology* looked at how preoperative melatonin affected children (ages 2 to 8). About 25% of children who underwent surgery with general anesthesia had an episode of emergence delirium, but that percentage dropped to 5% if children received melatonin prior to their operation.

**4** Ensure that parents are allowed into the recovery room immediately after surgery. This allows parents to be present when their child wakes up. Seeing familiar faces, even in an unfamiliar and painful setting, may help minimize postoperative anxiety for both parents and children.

**5** Counsel parents on pain management for their children. Doctors should ensure that parents understand how much pain their child might experience and how they can tell if pain medication should be adjusted. Children cannot always communicate about the pain they are experiencing, and many parents are afraid to give them the medication they may need. Children shouldn't have to suffer unnecessarily—a simple, straightforward conversation with parents about how they can minimize their child's pain can make a significant difference.

Although these steps may seem simple, physicians too often do not take the time that's needed to implement these strategies. Doing so will not only help make the surgical process easier for parents, children, and the surgical team, but it will also minimize the long-term negative effects that can result from postoperative trauma.

*Zeev N. Kain, MD, has indicated to Physician's Weekly that he has received grants/research aid from the NIH. For more information on this article, including references, please visit [www.physweekly.com](http://www.physweekly.com).*